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A Royal Litany in a Private Context

By Tamás A. Bács

In memoriam László Kákosy

1. Introduction

One of the most often cited texts of Theban Tomb 65 is a litany addressed to Amen-Re comprising the deity's various forms and a series of related Theban temple names and toponyms. It is particularly this latter feature that has elicited many references due to the text's late New Kingdom date. Belonging to the late Ramesside decoration of the tomb-chapel that was created during the first half of Ramesses IX's reign[1], it continues to serve mainly as a convenient source for the occurrence of certain temple names and localities at such a late date[2]. In a more concrete way, it has been also used in one or two cases as a dating tool[3]. Yet as the text itself has not been studied in its own right, its transparency as a source has never been seriously called into question. Viewing it then with due circumscription in the context of the said decorative program as well as its religio-literary genre it presents several problems that make it a less accessible text. In many ways, as I intend to show below, assessing the text on its own merit may remove much that has been thought straightforward about it. As so often, however, such losses are compensated for by gains of a different kind.

2. The Text

The litany text in question forms the first part of a larger liturgical composition, a so-called *Morgenlied* or 'morning hymn'[4]. Located on the Northern Rear Wall of the tomb-chapel's transverse hall[5], it is the main textual component of a scene representing the tomb-owner Imiseba performing an offering ritual before Amen-Re, Mut and Khonsu. The complete text was formally arranged into twenty-six columns with the litany section occupying the first seventeen (Fig. 1). In contrast to the three verses of the

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[1] For the tomb's date, see T.A. Bács, in: *GM* 148, 1995, pp. 7–11.

[2] See, e.g. Helck, *Materialien*: also E. Otto, *Topographie des thebanischen Gaues*, *UGAÄ* 16, Berlin 1952, p. 16 (hereafter cited as Otto, *Topographie*).

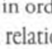
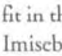
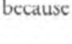
[3] For example, in the case of Thutmosis III's Deir el-Bahari temple, *Ḏsr-ꜣḫt*, the temple's destruction is placed in or after Ramesses IX's reign, due to its mention in the text (No. 16), see e.g. J. Lipinska, in: *JEA* 53, 1967, p. 28 n. 11.

[4] See J. Assmann, *LÄ* III, p. 853; also J. Assmann, *LÄ* III, pp. 1062–1066.

[5] See PM^{2} I,1, p. 130 (9); *LD* III, pl. 236a; *KRI* VI, pp. 549–550; for a transliteration and translation (albeit missing l. 16) see further as 'Text 91' in J. Assmann, *Sonnenhymnen in Thebanischen Gräbern*, *Theben* 1, Mainz 1983, p. 130 (hereafter cited as Assmann, *Sonnenhymnen*).

'wakening' song that run continuously[6], each line of the litany was placed in a separate column. An introductory line or heading that was otherwise standard for litanies was omitted much in the same way as a caption from the scene that might have defined the type of ritual action being performed[7]. Whether this was simply due to a lack of sufficient space or rather more conceptual reasons remains for the moment obscure.

The list character and verbal repetitiveness of the text, basic traits of the genre, were visually conveyed by organising the vertical columns into four space units horizontally. These divisions, however, relate to the aesthetic layout of the text rather than the actual textual divisions and were not therefore marked off into separate compartments by horizontal lines as in many litanies[8]. The surviving traces of a system of red guidelines[9] reveal that the first space unit was to contain the introductory formula *wdn n*, "an offering-litany to"[10]. The second holds only the name of the god Amen-Re (for the two exceptions, see below). The third and longest unit, probably intended to accommodate three 'ideal squares', contains the variable element of the text, thus either an epithet or a locality introduced by *m*. This is then followed by the standard formula *m-dd*, "by the gift of…", with alternating *nsw*, "King" or *sꜣ Rꜥ*, "Son of Re". The fourth and final unit carries either the *prenomen* or the *nomen* of the king, yet again without a determinative[11].

Within this scheme the influence of the limited space available on the contents of the text, especially for the variable element, cannot be underestimated. A constant struggle on the part of the artist of trying to fit in text elements of different lengths into the same predefined space can be clearly detected[12]. One easily recognisable method was to substitute the group  with the smaller one of  as in cols. 5 and 17 or the similar use of  for in the last three columns (15–17). Another visible space saving device was the occasional use of the Ramesside 'ideal square' instead of the traditional one, as for example in cols. 6, 13 to 17[13]. For the same reason in one case at least, an abridged

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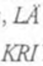
[6] In addition, of the nine columns containing this section of the composition, the last six had to be shortened in order to fit in the figure of the three musicians. This was necessary, because these were placed higher than originally planned in relation to Imiseba.

[7] See in general J. Assmann, *LÄ* III, p. 1062; for the heading of the great Luxor temple litany of Ramesses II, see G. Daressy, in: *RT* 32, 1910, p. 62 (= *KRI* II, 623); also for those of the two Ramesseum litanies, see J.-C. Goyon/H. el-Achirie, *Le Ramesseum* VI. *La salle des litanies (R)*, *CEDAE*, Cairo 1974, pp. 23–24 and 28–29 (= *KRI* II, 657, 659).

[8] For such compartmentalisation, see e.g. again the Luxor temple litany and the Ramesseum litanies referred to in the preceding note; or the two lists of Memphite gods in the Abydos temple of Sety I, see J. Baines, in: J. Baines et al. (eds.), *Pyramid Studies and Other Essays, Presented to I. E. S. Edwards*, *Occasional Publications* 7, London 1988, pp. 124–133.

[9] During the epigraphic drawing of the text by K. Vértes it was also observed that the original layout of the scene differed in several details from the one eventually actualised. In case of the litany, for example, traces of four horizontal guidelines run through all of the initial -signs (G 43) of *wdn*. Their spacing indicates that they would have marked out an intended block border.

[10] For the translation, see the comment of Assmann who renders it in German as "Ein Weihopfer für…", in: Assmann, *Sonnenhymnen*, p. 130 with n. a; also J. Assmann, *LÄ* III, p. 1062.

[11] In the Luxor temple litany alternates with , *KRI* II, 623.

[12] The usual method with litanies follows the general procedure found with tabulated lists. Ample space was left in each column for texts of different lengths, while a visually balanced effect was achieved by closing them off with a horizontal line and placing the taxogram of deity (uniform or varied depending on the type of litany, see in the Luxor temple litany, *KRI* II, 623) on it. In the present case this feature was completely omitted.

[13] For the Ramesside 'ideal square', see conveniently A. Loprieno, *Ancient Egyptian. A linguistic introduction*, Cambridge 1995, pp. 21–22.

form of a toponym was used (col. 12, *Ḥr-Ỉmn* for *Ḥr.ỉ-ḥr-Ỉmn*)[14]. More important are the probable omissions due to lack of space. Thus, in its present form the text appears as addressing different Theban forms of Amen-Re identified by either an epithet or a locality. Some epithets, however, correspond to known localities (see further below) and in these cases an omission of the preposition *m* is highly likely. For this reason in the following translation I have opted not to translate most of the epithets and toponyms but leave them for the commentary together with suggested emendations.

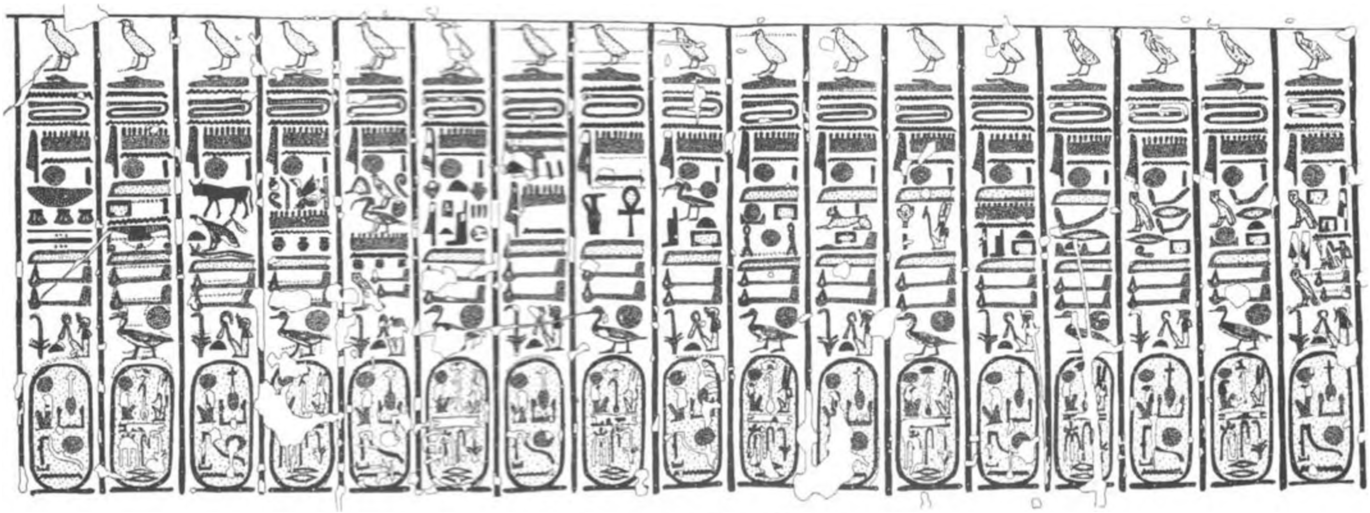


Fig. 1: Litany text (Drawing by K. Vértes)

2.1 Transliteration

wdn n	*Ỉmn-Rꜥ*	*nb nswt tꜣwy*	*m-dd nswt*	*(Nfr-kꜣ-Rꜥ stp-n-Rꜥ)*
wdn n	*Ỉmn-Rꜥ*	*m Pr-n-nbw*	*m-dd sꜣ Rꜥ*	*(Rꜥ-ms-sw Ḫꜥ-<m>-wꜣst mrr-Ỉmn)*
wdn n	*Ỉmn-Rꜥ*	*Kꜣ-mwt.f*	*m-dd nswt*	*(Nfr-kꜣ-Rꜥ stp-n-Rꜥ)*
wdn n	*Ỉmn-Rꜥ*	*Ṯnw-mnw*	*m-dd sꜣ Rꜥ*	*(Rꜥ-ms-sw Ḫꜥ-<m>-wꜣst mrr-Ỉmn)*
wdn n	*Ỉmn-Rꜥ*	*ỉww-ꜣẖ-mnw*	*m-dd nswt*	*(Nfr-kꜣ-Rꜥ stp-n-Rꜥ)*
wdn n	*Ỉmn-Rꜥ*	*ḥrt-ib Ỉpt-swt*	*m-dd sꜣ Rꜥ*	*(Rꜥ-ms-sw Ḫꜥ-<m>-wꜣst mrr-Ỉmn)*
wdn n	*Mnw-Ỉmn*		*m-dd nswt*	*(Nfr-kꜣ-Rꜥ stp-n-Rꜥ)*
wdn n	*Ỉmn*	*Ḫnm-ꜥnḫ*	*m-dd sꜣ Rꜥ*	*(Rꜥ-ms-sw Ḫꜥ-<m>-wꜣst mrr-Ỉmn)*
wdn n	*Ỉmn-Rꜥ*	*ꜣẖ-swt*	*m-dd nswt*	*(Nfr-kꜣ-Rꜥ stp-n-Rꜥ)*
wdn n	*Ỉmn-Rꜥ*	*m ꜣẖt-nḥḥ*	*m-dd sꜣ Rꜥ*	*(Rꜥ-ms-sw Ḫꜥ-<m>-wꜣst mrr-Ỉmn)*
wdn n	*Ỉmn-Rꜥ*	*m Šnꜥ*	*m-dd nswt*	*(Nfr-kꜣ-Rꜥ stp-n-Rꜥ)*
wdn n	*Ỉmn-Rꜥ*	*m Ḥr-Ỉmn*	*m-dd sꜣ Rꜥ*	*(Rꜥ-ms-sw Ḫꜥ-<m>-wꜣst mrr-Ỉmn)*

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[14] As already noted by Traunecker with reference to Davies, two stelae in the Fitzwilliam Museum, Cambridge, corroborate the existence of this abridged form, see C. Traunecker, in: *Karnak* VII, 1982, p. 309 with n. 12; also Davies, *Puyemrê* II, p. 83.

wdn n	*Ỉmn-Rꜥ*	*m Mn-st*	*m-dd nswt*	*(Nfr-kꜣ-Rꜥ stp-n-Rꜥ)*
wdn n	*Ỉmn-Rꜥ*	*m Ḏsrt*	*m-dd sꜣ Rꜥ*	*(Rꜥ-ms-sw Ḫꜥ-<m>-wꜣst mrr-Ỉmn)*
wdn n	*Ỉmn-Rꜥ*	*m Ḏsr-ḏsrw*	*m-dd nswt*	*(Nfr-kꜣ-Rꜥ stp-n-Rꜥ)*
wdn n	*Ỉmn-Rꜥ*	*m Ḏsr-ꜣḫt*	*m-dd sꜣ Rꜥ*	*(Rꜥ-ms-sw Ḫꜥ-<m>-wꜣst mrr-Ỉmn)*
wdn n	*Ỉmn-Rꜥ*	*m Pr-hiynꜣ*	*m-dd nswt*	*(Nfr-kꜣ-Rꜥ stp-n-Rꜥ)*

2.2 Translation:

An offering-litany for Amen-Re, *Lord-of-the-Thrones-of-the-Two-Lands*,
by the gift of King Neferkare Setepenre.
An offering-litany for Amen-Re, in the *House of Gold*,
by the gift of the Son of Re Ramesses Kha<em>waset Mereramun.
An offering-litany for Amen-Re-*Kamutef*,
by the gift of King Neferkare Setepenre.
An offering-litany for Amen-Re, *Tenu-menu*,
by the gift of the Son of Re Ramesses Kha<em>waset Mereramun.
An offering-litany for Amen-Re, *Iu-Akh-menu*,
by the gift of King Neferkare Setepenre.
An offering-litany for Amen-Re, *who-dwells-in-Karnak*,
by the gift of the Son of Re Ramesses Kha<em>waset Mereramun.
An offering-litany for *Min*-Amun,
by the gift of King Neferkare Setepenre.
An offering-litany for Amun, *Khnemet-ankh*,
by the gift of the Son of Re Ramesses Kha<em>waset Mereramun.
An offering-litany for Amen-Re, *Akh-set*,
by the gift of King Neferkare Setepenre.
An offering-litany for Amen-Re, in *Akhet-neheh*,
by the gift of the Son of Re Ramesses Kha<em>waset Mereramun.
An offering-litany for Amen-Re, in the *Workshop*,
by the gift of King Neferkare Setepenre.
An offering-litany for Amen-Re, in *Her-Amun*,
by the gift of the Son of Re Ramesses Kha<em>waset Mereramun.
An offering-litany for Amen-Re, in *Men-set*,
by the gift of King Neferkare Setepenre.
An offering-litany for Amen-Re, in *Djeseret*,
by the gift of the Son of Re Ramesses Kha<em>waset Mereramun.
An offering-litany for Amen-Re, in *Djeser-djeseru*,
by the gift of King Neferkare Setepenre.
An offering-litany for Amen-Re, in *Djeser-Akhet*,
by the gift of the Son of Re Ramesses Kha<em>waset Mereramun.
An offering-litany for Amen-Re, in *Per-Hina*,
by the gift of King Neferkare Setepenre.

2.3 Notes

col. 1. Not surprisingly, the list is headed by Amun of Karnak[15], just as in the great Luxor temple litany of Ramesses II[16]. As such, the form "Amen-Re, Lord-of-the-Thrones-of-the-Two-Lands", as already pointed out by Sethe, can be a standard abbreviation of "Amen-Re, Lord-of-the-Thrones-of-the-Two-Lands, Foremost in Karnak in Thebes" (*Ỉmn-Rꜥ nb nswt tꜣwy, ḫnty Ỉpt-swt m Wꜣst*)[17]. This is underlined further by the fact that the enshrined Amun to whom the litany is addressed is explicitly named in the accompanying caption as "Amen-Re, Lord-of-the-Thrones-of-the-Two-Lands, Foremost in Karnak" (*Ỉmn-Rꜥ nb nswt tꜣwy, ḫnty Ỉpt-swt*)[18].

col. 2. Identifying the otherwise little known form of "Amen-Re-in-the-House-of-Gold" or associating it with a known cult place presents a difficulty. The term "House of Gold" (*pr-n-nbw*) can designate a variety of architectural features, such as the burial chamber of the royal tomb[19], a room or area in a temple[20], or it can denote a dependency of the treasury[21]. Without further specification therefore a particular "House of Gold" mentioned in a text can be only inferred from the given context. As correctly observed by Otto, in this specific context, namely among cult-places associated with the East Bank of Thebes, it probably refers to a cult-statue of Amun in the treasury of Karnak[22].

Other references to "House of Gold" at Karnak and its cult are rare. From the late Ramesside period, in his autobiography the High Priest Amenhotep states that he, in the translation of Wente, "[introduced] into the House of Gold for Amen-Re, King of the Gods, to cause [him to be given attention] [...]"[23]. Unfortunately the passage is all too fragmentary to be of true relevance. Equally, the title of "God's Father and Prophet of Amun in the House of Gold" (*it-nṯr ḥm-nṯr n Ỉmn m Pr-n-nbw*) attested from the Libyan period merely confirms the existence of such a cult[24].

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[15] Already noted in Otto, *Topographie*, p. 16.

[16] G. Daressy, in: *RT* 32, 1910, p. 63 (= *KRI* II, 623).

[17] Sethe, *Amun*, p. 12.

[18] With further epithets of the depicted deity, see for now *KRI* VI, 548. It might be also worth noting that in his votive inscription at Karnak Imiseba offers to the same form of the deity, see *KRI* VI, 544; K. Sethe, in: *ZÄS* 44, 1907, pp. 35–41.

[19] As shown by the Turin plan, see J. Černý, *The Valley of the Kings. Fragments d'un manuscrit inachevé*, in: *BdÉ* 61, 1973, pp. 29–31; H. Carter/A.H. Gardiner, in: *JEA* 4, 1917, pp. 139–140.

[20] For example, in the Ramesseum according to pBM 10053 vs, see T.E. Peet, *The great tomb-robberies of the twentieth Egyptian dynasty*, Oxford 1930, p. 117.

[21] See S. Aufrère, *L'Univers minéral dans la pensée égyptienne*. II, in: *BdÉ* 105/2, 1991, p. 376; see in general also E. Schott, *LÄ* II, pp. 739–740.

[22] Otto also refers to an "Amun of the Noble Treasury of Amun" mentioned in the tomb of an Overseer of Works, Ramose (TT 166), Otto, *Topographie*, p. 16. For the tomb and its revised dating, see F. Kampp, *Die thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie, Theben* 13, Mainz 1996, pp. 454–455.

[23] E.F. Wente, in: *JNES* 25, 1966, p. 78; *KRI* VI, 537. In his well-known building text Amenhotep also states that he rebuilt a treasury from bricks within the temenos of Karnak (location unknown), but whether this had any relation to the mentioned "House of Gold" is not readily apparent, see *KRI* VI, 535; also S. Grallert, *Bauen – Stiften – Weihen. Ägyptische Bau- und Restaurierungsinschriften von den Anfängen bis zur 30. Dynastie. Text, ADAIK* 18/1, Berlin 2001, p. 342 (hereafter cited as Grallert, *Bauen – Stiften – Weihen*).

[24] G. Daressy, in: *RT* 16, 1894, p. 56 CVIII; note also here the occurrence of the name Nespaperennub (*Ns-pꜣ-pr-n-nbw*) on p. 59 (= Ranke, *PN* I, p. 174:20); for the remains of the burial furniture of a *Ns-<pꜣ>-pr-nb* in TT 386 (Intef), see D. Arnold/J. Settgast, in: *MDAIK* 20, 1965, pp. 58–59; see also in Ranke, *PN* I, p. 176:2.

col. 3. Given the importance of Amun's primordial manifestation "Amen-Re-Kamutef" in Theban theology and cult, its appearance in the list is hardly surprising[25]. Its significance is accentuated by the separate temple erected by Hatshepsut for this form of Amun that was still functioning in the Late Period and the processional feast of the deity that was second in importance in Luxor temple only to that of the *Opet*-festival[26].

col. 4. The form "Amen-Re-illustrious-in-monuments" (*Ỉmn-Rꜥ, ṯnw-mnw*) is to my knowledge hitherto unattested from elsewhere. As an epithet (*ṯny-mnw*), it sporadically appears associated with the king[27]. On present evidence, it would be equally problematic to presume an omission of an *m* and that *ṯnw-mnw* here is in fact not an epithet, but the name of a locality or cult-place. The only recognised edifice bearing such a name at Karnak was that of Akhenaten, the *Tni-mnw*[28]. However, there seems to be no epigraphic or other evidence (at least known to me) of a structure of such a name in Thebes dedicated to Amun.

col. 5. Otto has rightly argued that here the epithet "Iu-Akh-menu" is a conflation of two different toponyms, namely that of *Iu(s)-akhes* (var. *Ỉw-ꜣḫ.s, Ỉw-ꜣḫt.s*) and *Akh-menu*[29]. This of course raises the question at what point this conflation entered into the text, that is to say, at the level of the source or at that of its recording onto the wall. Unfortunately, no convincing evidence exists that would favour one or the other. On the one hand, there does not seem to be a direct model for the text or, not discounting the remote possibility that one did exist, it has not come down to us. On the other hand, the second possibility cannot be ruled out automatically either. As discussed above in connection with the spacing of the text, there are visible signs of editing during the text's copying. There is no obvious way therefore to distinguish between the two alternatives regardless of which we prefer. On much the same grounds, it cannot be decided either, whether this conflation was due to the unintentional merging of two originally separate columns (reading *Ỉmn-Rꜥ <m> Ỉw.s-ꜣḫ.s* and *Ỉmn-Rꜥ <m> ꜣḫ-mnw* resp.) or a misreading of the source.

While the latter structure named is the well-known temple of Thutmosis III at Karnak[30], the identification of the former is not as easy. On the rather meagre data available Otto and Nims were only able to render probable its designating the area of the temenos of the Khonsu temple at Karnak[31]. In the court of the said temple Herihor appears as offering to "Amen-Re, Lord of the Thrones of the Two Lands, residing in Ius-akhes, the Great God, the Beloved One" in a context of surrounding scenes, as remarked by NIMS, that show deities of different localities[32]. He also cites as evidence, albeit inconclusive, the depiction of a female personification *Ỉw-3ḫt.s* partly preserved on a Cairo Museum fragment of unknown provenience[33].

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[25] See e.g. H. Jacobsohn, *LÄ* III, pp. 308–309; G. Haeny, in: *GM* 90, 1986, pp. 33–34; L. Bell, in: *JNES* 44, 1985, pp. 258–259.

[26] For the sanctuary, see H. Ricke, *Das Kamutef-Heiligtum Hatschepsut's und Thutmoses' III. in Karnak, BÄBA* 3/2, Kairo 1954; for the feast of the procession from Karnak to Luxor temple, see W.R. Johnson, in: D.P. Silverman (ed.), *For His Ka: Essays Offered in Memory of Klaus Baer, SAOC* 55, Chicago 1994, pp. 140–141; L. Bell, in: B.E. Shafer (ed.), *Temples of Ancient Egypt*, London and New York 1997, p. 178.

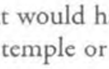
[27] For Ramesses II see e.g. W. Helck, *Die Ritualszenen auf der Umfassungsmauer Ramses' II. in Karnak, ÄA* 18, Wiesbaden 1968, p. 127; for Herihor see The Epigraphic Survey, *The Temple of Khonsu, vol. 2: Scenes and Inscriptions in the Court and the First Hypostyle Hall, OIP* 103, Chicago 1981, pl. 139.

[28] M. Doresse, in: *Orientalia* 24, 1955, p. 117; also with literature J. Lauffray, in: *Karnak* VI, 1973–1977, pp. 67–89.

[29] Otto, *Topographie*, p. 16.

[30] The Luxor litany of Ramesses II explicitly includes "Amen-Re in Akh-menu", see G. Daressy, in: *RT* 32, 1910, p. 64 no. 40 (= *KRI* II, 624:10).

[31] Otto, *Topographie*, pp. 16, 32; C.F. Nims, in: *JNES* 14, 1955, p. 117 with n. 62; see also Helck, *Materialien* I, pp. 853–854.

Significantly, the toponym occurs elsewhere as well in TT 65. A sub-scene of the Northern Front Wall shows five statues of Amun and one of Ahmose-Nefertari four Amun statues of which were donated by the king Ramesses IX but all of them made under the supervision of Imiseba. Among these the caption identifies the third statue of *ḏʿm*-gold as donated in  (*Ỉw-3ḫt.s*). This then presupposes the existence of at least a built cult-place that would have housed the statue. The exact location of such, be it within the temenos of the Khonsu temple or not, must however remain undefined until more definitive data is uncovered.

col. 6. The orthography of *ḥry-ib* in its feminine form *ḥrt-ib* here has led OTTO to consider "Amen-Re, who-dwells-in-Karnak" as a mistake for "Amaunet, who-dwells-in-Karnak" for whom this was the standard epithet[34]. Although a reasonable assumption, it has the disadvantage of introducing a deity other than Amun into the litany. One alternative could be to accept it as a simple and otherwise not uncommon mistake and consider it as referring to a form of Amun known, for example, from the temple of *Ḏsr-3ḫt*, which is listed in col. 16[35]. A further possibility that might be raised is more remote, but might explain the conflation seen in the previous column as well. Thus, in the source text this column might have originally held the form "Amen-Re, residing in Akh-menu" (*Ỉmn-Rʿ, ḥry-ib 3ḫ-mnw*)[36] and the next one, col. 7, which only has Min-Amun now, the designation "in Karnak" (*m Ỉpt-swt*) or "residing in Karnak" (*ḥry-ib Ỉpt-swt*).

col. 7. In contrast to the finalised form, the preliminary draft has Amen-Re originally underneath the hieroglyphs of Min[37]. Notwithstanding the conjecture set out in the previous note, the most plausible explanation is to envisage the artist as mechanically filling in the second space unit with the name of Amen-Re in red and only checking the source when doing the final version. That the same situation can be observed in the next column, where Amen-Re underlies Amun, strongly supports such an interpretation.

col. 8. The significance of changing here the initially drafted Amen-Re form into Amun eludes me (see previous note). It could well be only an effect of the writing of the analogous Ramesside forms of "Amun-United-with-Thebes" and "Amun-United-with-Eternity" or alternatively that of the 18th Dynasty form "Amun-in-Khnemet-ankh" (*Ỉmn m Ḫnmt-ʿnḫ*)[38].

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[32] For the scene, see The Epigraphic Survey, *The Temple of Khonsu, vol. 1: Scenes of King Herihor in the Court, OIP* 100, Chicago 1979, pl. 34; C.F. NIMS, in: *JNES* 14, 1955, p. 117.

[33] C.F. NIMS, in: *JNES* 14, 1955, p. 117. Another reference to the locality preserved in the priestly title of a certain Ahmes "Prophet of Amenopet of Iu-Akhes" from the Ptolemaic period is cited in HELCK, *Materialien* I, p. 854 based on material published by G. LEGRAIN, in: *BIFAO* 12, 1916, p. 112.

[34] OTTO, *Topographie*, p. 16; see also in general SETHE, *Amun*, pp. 32–33.

[35] M. DOLINSKA, in: R. GUNDLACH/M. ROCHHOLZ (eds.), *Ägyptische Tempel – Struktur, Funktion und Programm, HÄB* 37, Hildesheim 1994, p. 38.

[36] For the form, see SETHE, *Amun*, pp. 14–15.

[37] For the syncretistic form of Amun, see R. GUNDLACH, *LÄ* IV, pp. 138–139; SETHE, *Amun*, pp. 19–22; L. CHRISTOPHE, *Divinités de la salle hypostyle de Karnak,* in: *BdÉ* 21, 1955, pp. 54, 83.

[38] In general for the former, see H.H. NELSON, in: *JNES* 1, 1942, pp. 127–155. For the 18th Dynasty form in the lists of Puyemre and Rekhmire, see DAVIES, *Puyemrê* I, pl. XL; and DAVIES, *Rekh-mi-Reʿ*, pl. LXXXVIII.

The exact location of the memorial temple of Thutmosis I on the West Bank, "Khnemet-ankh" (United-with-Life)[39], is at present still an unsettled question. Despite several attempts to define either the general area in which it should be sought for or identify the structure itself, no decisive archaeological or epigraphic evidence has been put forward so far. WINLOCK would have situated it somewhere between "Men-set" and "near the foot of the Hatshepsut causeway", based on the logic of a chronological progression of memorial temples in a north-south direction[40]. Due to its association with the small temple there in late sources OTTO has argued for the area of Medinet Habu[41]. And more recently QUIRKE has opted for an identification with the so-called 'chapel of Wadjmose', conjecturing that a kind of royal family cult developed here secondarily upon the relocation of the cult of Thutmosis I to Deir el-Bahari by Hatshepsut[42].

A related problem concerns the cult itself. Different members of the personnel attached to the cult of Thutmosis I are attested down to the end of the 20th Dynasty[43]. But as KEES noted, without a clear reference to "Khnemet-ankh" in the title due caution has to be exercised when attributing them all to this temple[44].

From the point of view of the litany text at hand this is all the more regrettable, since it does not help in answering the question of why this particular form of Amun heads the list of West Bank temples. In the different lists enumerating temples of the West Bank (Puyemre, Rekhmire, Didiya, Nebwenenef, Ashmolean tablet) "Khnemet-ankh" never heads such a list.

col. 9. The column, preferably to be read here as *Ỉmn-Rꜥ* <*m*> *ꜣḫ-swt*, refers to the temple of Mentuhotep II (*Nb-ḥpt-Rꜥ*) at Deir el-Bahari[45]. In comparison to the 18th Dynasty, evidence for the cult in "Akh-sut" is sparser from the Ramesside period[46]. In effect, the present mention appears to be the latest New Kingdom reference to it.

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[39] For the name, see OTTO, *Topographie*, p. 71; R. STADELMANN, in: *MDAIK* 34, 1978, pp. 172–173; for reservations about the traditional translation, G. HAENY, in: *L'Égyptologie en 1979*, Paris 1979, pp. 111–116; G. HAENY, in: R. GUNDLACH/M. ROCHHOLZ (eds.), *Ägyptische Tempel – Struktur, Funktion und Programm*, *HÄB* 37, Hildesheim 1994, pp. 101–106; more briefly G. HAENY, in: B.E. SHAFER (ed.), *Temples of Ancient Egypt*, London and New York 1997, p. 92–93. Generally on the names of royal memorial temples with literature see now also B.J.J. HARING, *Divine Households: Administrative and Economic Aspects of the New Kingdom Memorial Temples in Western Thebes*, Leiden 1997, pp. 20–29 (hereafter cited as HARING, *Divine Households*).

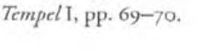
[40] H.E. WINLOCK, in: *JEA* 15, 1929, p. 66.

[41] OTTO, *Topographie*, p. 71. The date and circumstances of the transference of the name to that of the temple of Djeme is unknown, see with references L. GABOLDE/M. GABOLDE, in: *BIFAO* 89, 1989, p. 134 with n. 29.

[42] S. QUIRKE, in: *JEA* 76, 1990, p. 174; on the chapel of Wadjmose, see e.g. also S. SNAPE, in: *JEA* 71, 1985, pp. 180–183; A.-M. LOYRETTE, in: *Memnonia* 1, 1990/1991, pp. 119–125.

[43] For a list of known individuals attached to the cult and improving upon those of WINLOCK (H.E. WINLOCK, in: *JEA* 15, 1929, p. 68) and HELCK (HELCK, *Materialien* I, pp. 871–873), see now HARING, *Divine Households*, pp. 428–431.

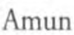
[44] H. KEES, in: *ZÄS* 85, 1960, p. 51.

[45] In general, D. ARNOLD, *LÄ* I, pp. 1011–1017; for the name with the form  see also ARNOLD, *Mentuhotep-Tempel* I, p. 90; HELCK, *Materialien* I, p. 863; OTTO, *Topographie*, p. 60. The tomb (*mr*) of the king "in Djeser(et)", as is well known, is of course referred to in the contemporary tomb-robbery papyrus *pAbbott* (rt. 3,14), PEET, *Tomb-robberies*, pl. II, 3.

[46] As noted by HELCK, several are known from the 18th Dynasty, but only one from the Ramesside period (mentioned in *oCairo* 25667, which however is dated to the 18th Dynasty in HARING, *Divine Households*, p. 225 n. 1). He also observes that the temple was economically active till the end of the 20th Dynasty, HELCK, *Materialien* I, p. 899. For the history of the temple building itself in the Ramesside period, see the summary, in ARNOLD, *Mentuhotep-Tempel* I, pp. 69–70.

col. 10. Otto, based on the term's use in *pAbbott* 2,2, tentatively proposed a cult place associated with the tomb of Amenhotep I for "Amen-Re-in-the-Horizon-of-Eternity"[47]. Kees, on the other hand, assumed that it signified the funerary temple of Amenhotep I[48]. Refuting this in his study of the expression, Černý suggested instead that "'Amon-Re in the Horizon of eternity' adored in a Theban tomb of a later part of the XXth Dynasty (i.e. TT 65) is simply Amon-Re of the king's Tomb, perhaps his figure on the wall of the Tomb"[49]. His conclusion was founded on his understanding of the expression as a synonym of *pꜣ ḫr*, "The Tomb", and *st-mꜣꜥt*, "Place of Truth". However, the verdict on the conceptual meaning of these terms is still open[50]. The problem is above all theoretical, as pointed out by Ventura, since it depends on our acceptance of either many or only one single meaning for them[51].

Thus, in a more recent discussion, Haring, following Černý, would accept *ꜣḫt-nḥḥ*[52] as signifying besides the royal tomb (Amenhotep I), the royal necropolis[53] and the memorial temples of the West Bank[54]. The expression's ambiguity therefore defies any attempt to define more closely the form of Amen-Re invoked by Imiseba.

col. 11. The form "Amen-Re-in-the-Workshop" (, *šnꜥ*, "workshop")[55], as already noted by Otto[56], is otherwise unknown. Apparently a form of Amun similar to "Amen-Re-in-the-House-of-Gold" in col. 2 is meant here. The identification of the "workshop" in question without any further qualification, however, is less than straightforward. If the often referred to main workshop of Karnak temple, the *šnꜥ* (*wꜥb*), is implied here[57], then its position in the list among obviously West Bank cult-places remains to be explained. Even less satisfactory would be to presume that a temple workshop on the West Bank is meant, as it would require some indication as to which specific temple or memorial temple is involved[58]. Understanding the form, on the other hand, as a more generalized one in a sense of Amun as patron of all workshops is difficult to reconcile with the definable and specific localities mentioned by the list in this section.

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[47] Otto, *Topographie*, pp. 16, 59–60.

[48] H. Kees, *Das Priestertum im ägyptischen Staat*, *PdÄ* 1, Leiden 1953, p. 131 n. 1.

[49] J. Černý, *A Community of Workmen at Thebes in the Ramesside Period*, in: *BdÉ* 50, 1973, pp. 74–78 (hereafter cited as Černý, *Community*); in his note (p. 78 n. 3) he also adds that there is indeed a figure of Amun-Re in the royal tomb of Ramesses IX (KV 6). That royal tombs, especially in the late Ramesside period, were the focus of personal piety for the Deir el-Medina crew expressed by the deposition of votive ostraca has been recently demonstrated by Keller, see C.A. Keller, in: C.J. Eyre (ed.), *Abstracts of Papers. Seventh International Congress of Egyptologists, Cambridge, 3–9 September 1995*, Oxford 1995, pp. 97–99; more briefly C.A. Keller, in: D.P. Silverman (ed.), *For His Ka: Essays Offered in Memory of Klaus Baer*, *SAOC* 55, Chicago 1994, p. 153.

[50] See, for example, the re-study of the terms by Ventura whose conclusions, however, have not gained general acceptance. In his view, for example, *pꜣ ḫr*, as distinct from *st-mꜣꜥt* is an administrative unit, while *st-mꜣꜥt* itself is the Theban necropolis, see R. Ventura, *Living in a City of the Dead. A Selection of Topographical and Administrative Terms in the Documents of the Theban Necropolis*, *OBO* 69, Fribourg – Göttingen 1986, pp. 16–17, 50–51.

[51] R. Ventura, *op. cit.*, pp. 46–47 with n. 59.

[52] *ꜣḫt-nḥḥ*, besides occurring in various titles of individuals associated with the Deir el-Medina establishment (Černý, *Community*, pp. 76–77), is also part of a title of the High Priest of Amun, namely that of "*Sem*-priest in the Horizon-of-Eternity". It is attested for Imiseba's contemporary the HP Amenhotep on the so-called "Eastern Postern Gate" at Karnak ("*Sem*-priest in the Horizon-of-Eternity", in *KRI* VI, 540:12); and in the Karnak graffito of the same HP's subordinate ("*Sem*-priest (5) [in the Horizon-of-Eternity]", in *KRI* VI, 534:4–9; see for the graffito, C. Traunecker, in: *BSFÉ* 85, 1979, p. 29 with n. 16). It also figures in a string of titles in *pAnastasi* IV, 4, 1–2 (= *pAnastasi* V, 2, 1), A.H. Gardiner, *Late-Egyptian Miscellanies*, Bruxelles 1937, pp. 38, 56. Other references are in Haring, *Divine Households*, p. 22 n. 6.

[53] Taken as a "métaphore pour la nécropole" for its use by Ramesses III in *pHarris* I 3,6, see P. Grandet, *Le papyrus Harris (BM 9999), 3-Glossaire*, in: *BdÉ* 129, 1999, p. 5.

[54] Haring, *Divine Households*, pp. 22–23; see earlier also in R.A. Caminos, *Late-Egyptian Miscellanies*, London 1954, pp. 144–145.

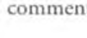
[55] For the translation of "workshop" preferred to that of "magazine" and the orthography of *šnꜥ*, see D. Polz, in: *ZÄS* 117, 1990, p. 47 with n. 35, p. 54.

[56] Otto, *Topographie*, p. 16.

[57] On the "pure workshop", see C. Traunecker, in: *RdE* 38, 1987, pp. 147–162; on its existence during the pontificate of

col. 12. The small number of data relating to Heri-her-Amun (*Ḥr.i-ḥr-Ỉmn*, "My-face-is-towards-Amun") has been assembled more recently by TRAUNECKER[59]. The cult-place is first mentioned under Hatshepsut in the tomb of Ineni (TT 81) and appears on present evidence at the latest here in TT 65 or the 'Onomasticon of Amenope' (depending on what dating is accepted for the latter)[60]. Unfortunately however, the data at hand is insufficient for a closer identification. At present the most plausible suggestion is TRAUNECKER's, namely, that it should be sought for somewhere in the vicinity of the Gurna temple of Sety I[61].

col. 13. The temple of Men-set (*Mn-ỉst, Mn-ỉswt*, "Enduring-of-Places") located in Dra Abu el-Naga remains a constant source of scholarly disagreement. Based on the studies by VAN SICLEN and THIEM, the consensus today regards the temple as one primarily dedicated to Amun, "having a special association with the deified Ahmose-Nefertari (and a distinctly minor role for the deified Amenhotep I)"[62]. As argued by THIEM, it may have been also identical with the so-called 'temple of Amenhotep-of-the-Court' (*pr-Ỉmn-ḥtp-n-pꜣ-wbꜣ*) in contrast to VAN SICLEN, who would rather equate it with the 'temple of Amenhotep-of-the-Garden' (*pr-Ỉmn-ḥtp-n-pꜣ-kꜣmw*)[63].

col. 14. The toponym *Ḏsrt* as a cult-place of Amun[64] distinct from the following two, namely *Ḏsr-ḏsrw* and *Ḏsr-ꜣḫt*, appears in the 19th Dynasty HP Nebwenenef's list as well[65]. It denotes the bay of Deir el-Bahari as also underlined by the term's orthography: [66].

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the HP Amenhotep, see his Karnak Building Text, in *KRI* VI, 535:6; for a recent translation and commentary, GRALLERT, *Bauen – Stiften – Weihen*, pp. 342–343.

[58] For a discussion of the workshops in general and those of the West Bank memorial temples in particular, see now HARING, *Divine Households*, pp. 116–119, 194–195. On the New Kingdom administration of the workshops, D. POLZ, in: *ZÄS* 117, 1990, pp. 43–60.

[59] C. TRAUNECKER, in: *Karnak* VII, 1982, pp. 307–311; see earlier HELCK, *Materialien* I, p. 76.

[60] See DZIOBEK, *Ineni*, pp. 39–40; A.H. GARDINER, *Ancient Egyptian Onomastica*. Vol. I, Oxford 1947, pp. 24–26, on *Heri-her-Amun*, Vol. II, p. 27, no. 338.

[61] C. TRAUNECKER, in: *Karnak* VII, 1982, p. 311.

[62] C. VAN SICLEN, in: *Serapis* 6, 1980, p. 194; A.-C. THIEM, in: *GM* 175, 2000, pp. 79–84. On the priesthood and economical aspects of the temple, HELCK, *Materialien* I, pp. 87–88; for the functioning of the cult in the 21st Dynasty, E. GRAEFE, in: *BiOr* 33, 1976, p. 318.

[63] C. VAN SICLEN, in: *Serapis* 6, 1980, p. 194; A.-C. THIEM, in: *GM* 175, 2000, p. 84.

[64] For "Amun, Lord of Djeseret" in a graffito at Djeser-akhet, see e.g. M. MARCINIAK, *Deir el-Bahari* I. *Les inscriptions hiératiques du Temple de Thoutmosis III*, Varsovie 1974, p. 76 no. 17.

[65] OTTO, *Topographie*, p. 15.

[66] D. ARNOLD, *LÄ* I, p. 1007; ARNOLD, *Mentuhotep-Tempel* I, p. 91; HELCK, *Materialien* I, pp. 875–876; OTTO, *Topographie*, pp. 61–62.
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col. 15. The identification of "Amen-Re-in-Djeser-djeseru" poses no problem, since it denotes Amun of Hatshepsut's temple at Deir el-Bahari[67].

col. 16. As in the case of the previous form, "Amen-Re-in-Djeser-Akhet" can be readily defined. It is of course the Amun of Thutmosis III's Deir el-Bahari temple[68].

col. 17. The cult-place *Pr-hiynꜣ* has been associated by OTTO with the bark station of Hatshepsut before the Mut temple at Karnak[69]. Accepting his conjecture, however, would also lead to the inevitable conclusion that the list rather unexpectedly terminates with an establishment on the East Bank. Opposing such identification HELCK, on the other hand, had opted for supposing *Pr-hiynꜣ* to be a so far unidentified site on the West Bank[70]. He based his opinion on the unpublished Ashmolean tablet fragment, the content of which closely resembles Imiseba's litany in character[71]. Here "Amun in *pr-hi[nꜣ]*" is mentioned in the clear context of West Bank cult-places, rendering therefore HELCK's proposition the more plausible for the moment.

3. The Contexts

Insofar as the conceptual context of the text is concerned, the particular decorative program designed for the tomb-chapel's transverse hall emphatically defines it. Displaying an assertive individuality and integrity, this program is cogently structured around the theme of a royal memorial temple[72]. Accordingly, the main scenes depict the *Opet*-festival (Northern Front Wall), the Valley-festival (Southern Front Wall), the New Year-festival (Northern Rear and End Wall), and the bark of Amun resting in a shrine (Southern End Wall)[73]. The scene containing the litany or more properly the *Morgenlied* then relates directly to this programmatic content both thematically and compositionally[74]. On the one hand, it is intimately linked as a genre with the processional feasts of Amun's cult, as also pro-

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[67] See conveniently, in D. ARNOLD, *LÄ* I, pp. 1017–1022; also E. NAVILLE, *The Temple of Deir El Bahari* I–VI, *EEF Memoirs* 13, 14, 16, 19, 27, 29, London 1895–1908; and S. BRZOSTOWSKI/L. KRZYZANOWSKI (eds.), *The Temple of Queen Hatshepsut.* I–IV, Warsaw 1979–1991.

[68] See e.g. J. LIPINSKA, in: *JEA* 53, 1967, pp. 25–33; J. LIPINSKA, *Deir el-Bahari* II. *The Temple of Tuthmosis III. Architecture*, Varsovie 1977, pp. 62–64; M. DOLINSKA, in: R. GUNDLACH/M. ROCHHOLZ (eds.), *Ägyptische Tempel – Struktur, Funktion und Programm, HÄB* 37, Hildesheim 1994, pp. 33–45; more lately J. AKSAMIT, in: *EA* 18, 2001, pp. 21–24.

[69] OTTO, *Topographie*, p. 16. For the possible translations of the name *pr hn* as "House of Chests", "House of Jubilation" (*pr hnw*) or "House of the Family" (*pr hnw*) see H. RICKE, *Das Kamutef-Heiligtum Hatschepsut's und Thutmoses' III. in Karnak*, *BÄBA* 3/2, Kairo 1954, pp. 42–43.

[70] HELCK, *Materialien* I, p. 859.

[71] See HELCK, *Materialien* I, p. 805, where the text is interpreted as recording the duties of an offering-servant. On closer inspection, however, HARING has voiced the opinion that it is actually an "invocation of offerings similar to those in the tombs of Rekhmire and Imiseba", in HARING, *Divine Households*, p. 137 n. 1.

[72] See more fully, in T.A. BÁCS, in: W.V. DAVIES (ed.), *Colour and Painting in Ancient Egypt*, London 2001, pp. 94–100; more briefly, in T.A. BÁCS, in: *EA* 21, 2002, pp. 21–24.

[73] For the latter scene that shows the king Ramesses IX offering before the enshrined bark of Amun, see for now C.K. WILKINSON/M. HILL, *Egyptian Wall Paintings: The Metropolitan Museum of Art's Collection of Facsimiles*, New York 1983, pp. 154–155.

[74] In artistic terms, the scene provides a balance to the offering scene on the hall's Southern Rear Wall, which however is of a different nature and content. For the scene in which Imiseba and his forebears offer to Osiris, see T.A. BÁCS, in: W.V. DAVIES (ed.), *Colour and Painting in Ancient Egypt*, London 2001, p. 96, and Colour pl. 31.3–4.

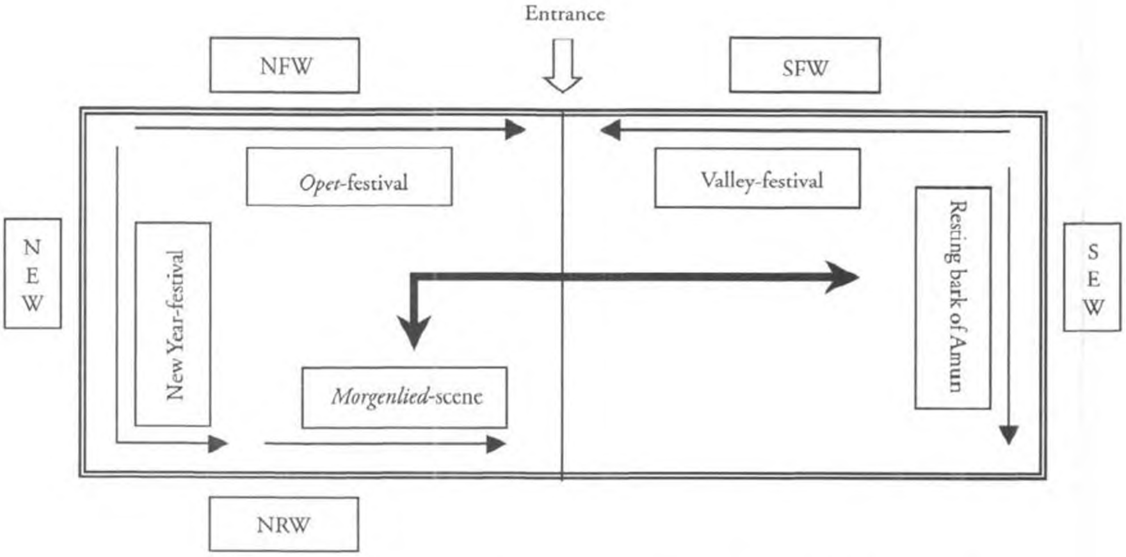

Fig. 2: The main programmatic elements of the transverse hall (excluding the Southern Rear Wall)

foundly displayed, for example, by the great litany of Ramesses II in the forecourt of Luxor temple[75]. On the other, it stands in relation to the scene on the Southern End Wall that presents the king offering to the bark of Amun that is depicted as resting here during the Valley-festival (Fig. 2)[76]. In sum, the five scenes together in a symbolic non-narrative manner evoke the most significant characteristics of processional feasts. Three of them, besides representing specific feasts on one level, portray the less restricted, while two the more restricted aspects of these feasts. This is subtly expressed by the placement of the scenes within the hall as well, with the former three placed on the front walls and one end wall, while the remaining two on the rear and other end wall.

The *Morgenlied*-scene, just as the other four, is an openly and undeniably royal (temple) scene. Nothing illustrates this better than the way in which even the minutest of iconographic details reflect this throughout the scene. Rendered with concentrated attention, this extends from the manner in which the ritual action is conveyed down to the particular details of cultic furniture[77]. For all its royal style, however, there is one significant difference between this scene and the others. Thus, here it is not the king Ramesses IX but the tomb owner Imiseba who is the central figure shown performing the ritual action before the Theban triad. In contrast, the other scenes always depict Imiseba within his own socio-cultural context almost as a relatively minor figure in a peripheral position relative to the king or the high priests. In the Southern End Wall scene, where the king offers to the bark of Amun that is resting in a shrine, Imiseba, in accordance with the ritual context, appropriately does not even appear. Here, however, we confront a conscious substitution of king with tomb owner. The complex of motives that lay behind this is very hard to assess and will not be explored here to its full depth. What should be stressed instead is its significance for the *Morgenlied*-text under study. It seems safe to assume that this substitution represents the personalisation of an otherwise universal (since royal) ritual act. Taking it as a simple or vagrant act of usurpation misses the point. Rather, it should enhance our awareness of the complexity of the discursive construction of identity and draw our attention to the fact that it should be understood within this context. It must be borne in mind that a man who considered himself a leading member of an intellectual elite produced the text. Expressed in other terms, this means that although the text conforms formally in every respect to royal ones, it is the person of Imiseba that the content of its litany section must have a more direct bearing on[78]. Pursuing such a line of inquiry, however, is not without considerable difficulties, since it requires such an intimate knowledge of Imiseba as an individual and the socio-cultural milieu in which he lived that is clearly unavailable to us. This much is obvious. Despite the difficulty, however, this seems to be the only approach with any promise of meaningful insights.

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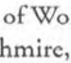
[75] See J. ASSMANN, *LÄ* III, p. 853; for the Luxor litany, see G. DARESSY, in: *RT* 32, 1910, p. 62.

[76] For the subtlety of the conceptual and artistic linkages in this case, see note 74 above.

[77] A detailed survey of the scene's iconography will be dealt with elsewhere. As a meaningful example, however, one such should be noted here, namely, the royal association of the instruments (the harp with the royal head wearing the blue crown and the lute with the royal head wearing a head-cloth) of the three musicians, see S. SCHOTT, in: *Mélanges* MASPERO I, 2, *MIFAO* 66, Cairo 1937–1938, p. 461 with n. 2, pl. II, figs. 2 and 4.

True to the genre, the litany section is made up of a combination of Amen-Re's major (Amen-Re, Lord-of-the-Thrones-of-the-Two-Lands, Amen-Re-Kamutef, and Min-Amun) and local, more specifically Theban forms[79]. By and large, it also shows a geographical division with the first seven forms associated with the East Bank and the remaining ten to the West Bank of Thebes (but see the notes to col. 11 above). From this level on, however, understanding the logic governing the selection of forms becomes obscure. It is important to note here that not unlike other texts of the genre, or the other scenes of the transverse hall, the litany's list is obviously multireferential. Although this might seem a statement of the obvious, I wish to stress that it cannot be presumed that a single motive lay behind its compilation[80]. Any attempt at a definitive interpretation of the list, on the other hand, is seriously compromised by the simple fact that there are too many uncertainties surrounding a number of the listed forms or localities as I hoped to show above in the notes to the translation.

Various lists of Theban temples and cult-places occurring in private contexts and discussed in turn by DAVIES, OTTO and HELCK in a sense all relate to the biography of the persons featuring them on their monuments[81]. Thus the lists of Ineni (Mayor of Thebes), Puyemre (2nd Prophet of Amun)[82], Didiya (, Overseer of Draftsmen)[83], Nebwenenef (High Priest of Amun), and Ramose (Overseer of Works) are more or less directly connected to their profession and career. In the case of the vizier Rekhmire, such a list forms part of an offering-list connected to his funerary endowment[84]. The closest parallel to Imiseba's list, the Ashmolean tablet, regrettably enough is too little known to be of any substantial value aside from the fact that it is also a list composed within the framework of an invocation offering[85]. The crucial question to be posed here then is: can a direct link be established between the list's contents and Imiseba's professional *persona*[86]?

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[78] A very similar view can be adduced when studying the sun-hymns included in the text-program of the tomb-chapel as shown so insightfully in ASSMANN, *Sonnenhymnen*, pp. XXXIII–XXXIV.

[79] See on this the remarks in J. ASSMANN, *LÄ* III, p. 1064.

[80] On this point, the disparate elements brought together in the universalistic litany of Ramesses II at Luxor serve as ample proof, see G. DARESSY, in: *RT* 32, 1910, pp. 62–69 (= *KRI* II, 622–627).

[81] DAVIES, *Puyemrê*, pp. 78–86; OTTO, *Topographie*, pp. 14–17; HELCK, *Materialien* I, pp. 804–806.

[82] On the Ineni and Puyemre lists see the discussion in HARING, *Divine Households*, pp. 134–139.

[83] The list on the statue of Didiya (CG 42122) from Karnak has been interpreted by DAVIES and followed in this by OTTO as mentioning localities with which Didiya was associated through his occupation, DAVIES, *Puyemrê*, p. 82; OTTO, *Topographie*, p. 15; also C. VAN SICLEN, in: *Serapis* 6, 1980, p. 192 j with n. 68. An interesting and thought-provoking observation of DAVIES was that the ordering of Didiya's list was based in essence on a literary device, namely on how the name of one temple played on the preceding one, see DAVIES, *Puyemrê*, p. 82.

[84] DAVIES, *Rekh-mi-Re'*, p. 72, pls. LXXXVII–LXXXIX.

The listing of the major forms of Amun in the litany hardly need explaining considering Imiseba's connection to Karnak temple, his main titles being "chief of the temple archives of the estate of Amun" (*ḥry sšw ḥwt-nṯr n pr-Ỉmn*) and "chief of the altar-chamber" (*ḥry ẖ3wt*)[87]. Preferably the inclusion of "Akh-menu" (in a garbled version) in col. 5 can be also interpreted in the same sense. As a rare instance, it is possible to see a more specific connection existing between Imiseba and the Amun sanctuary at *Ỉw-3ḫt.s* also present in col. 5. As noted above, we know that he was responsible for the execution of an Amun statue of *ḏ*ʿ*m*-gold set up here. From the fact that he was in the same way involved with the fashioning of a statue of Ahmose-Nefertari, although without specifying the sanctuary it was destined for, a similar motive might be guessed for the inclusion of "Men-set" in col. 13. This may also add an extra dimension of meaning to the presence of the upright shrine of Ahmose-Nefertari and the processional statue of Amenhotep I in its palanquin in the scene itself[88]. It might be ventured that the inclusion of "Amen-Re-in-the-House-of-Gold" (col. 2) and "Amen-Re-in-the-Workshop" (col. 11), though in these cases the connection is less specific, also stood in association with the official functions and related duties of Imiseba[89]. Unfortunately, however, extending this association to all of the institutions mentioned under the guise of the forms of Amun would overstretch the evidence. All the more so, as one feature of the list that is highly conspicuous is the total absence of cult-places originally built by the Ramessides. Less so in the East Bank section[90], but the omission of the West Bank temples, therefore the memorial temples of Sety I (Gurna), Ramesses II (Ramesseum), Ramesses III (Medinet Habu) or Ramesses IV/VI (Assasif) is more than surprising[91]. Given their importance and that more or less these temples are known to have been functioning during late Ramesside times[92] this is all the more un-expected[93]. Thus, if we were to assume an institutional connection between Imiseba and the named temples, we would be forced to explain the exclusion of the aforementioned ones[94]. For this our knowledge is clearly insufficient.

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[85] See HARING, *Divine Households*, p. 137 n. 1.

[86] For a discussion of personhood in general, J. ASSMANN, *LÄ* IV, pp. 963–978; for a postmodernist (more precisely third wave feminist) reading of the Egyptian evidence, see also L. MESKELL, *Archaeologies of Social Life. Age, Sex, Class et cetera in Ancient Egypt*, Oxford 1999, pp. 107–135.

[87] On Imiseba and his titles, T.A. BÁCS, in: *MDAIK* 54, 1998, p. 52 with n. 22.

[88] The presence of Ahmose-Nefertari (and to a lesser degree Amenhotep I) in the scene is explained otherwise by their participation in the great processional feasts of Amun, the *Opet-* and Valley-festivals. On this see the review of the evidence in G. HOLLENDER, *Amenophis I. und Ahmes Nefertari: Untersuchungen zur Entwicklung ihres posthumen Kultes anhand der Privatgräber der thebanischen Nekropole*, Magisterarbeit der Philosophischen Fakultät der Universität zu Köln 1991, pp. 126–128; see also C. LOEBEN, in: *Karnak* VIII, 1987, pp. 233–243. I would like to express my gratitude here to G. HOLLENDER for her kindness in allowing me the opportunity to consult her dissertation.

[89] This is underlined by his other titles enumerated by Imiseba in his tomb-chapel that include: *wab-priest* (*w*ʿ*b*), *great wab-priest with entry to Amun* (*w*ʿ*b* ʿ*3* ʿ*ḳ n Ỉmn*), *bearer of divine offerings of the Theban Ennead* (*sṯ3 ḥtp-nṯr n psḏt imy W3st*), *installer of floral offerings of all the gods of Upper and Lower Egypt* (*w3ḥ ḥtpw n nṯrw nbw Šm*ʿ*w Mḥw*), *leader of the nourishment of Amun in Karnak* (*sšm k3w n Ỉmn m Ỉpt-swt*), *overseer of the nourishment of Amun* (*imy-r k3w n Ỉmn*), *receiver of the* inw *of all the land* (*šsp inw n t3 nb*), *overseer of works of monuments of Amun in Karnak* (*imy-r k3wt n mnw n Ỉmn m Ỉpt-swt*).

[90] Although not a Ramesside foundation but given its importance, the omission of Luxor temple from the list is also striking.

[91] As a consequence, with the exception of "Amen-Re, Lord-of-the-Thrones-of-the-Two-Lands" none of the forms of Amun evoked in late Ramesside letters understandably show up in the litany of Imiseba. On the forms in the letters mostly associated with the small temple of Medinet Habu, the Decade-festival, and Luxor temple, see A.M. BAKIR, *Egyptian Epistolography from the Eighteenth to the Twenty-first Dynasty*, in: *BdÉ* 48, 1970, pp. 57–60.

[92] HELCK, *Materialien* I, pp. 899–901; also HARING, *Divine Households*, pp. 273–282; see also on the demographic situation and settlement pattern of Western Thebes during the reign of Ramesses XI as depicted by pBM 10068 vs. 2–8, in:

In comparison, with the exception of the mortuary complex of Mentuhotep II, the toponyms and institutions that can be identified with confidence refer to cult establishments that are associated above all with the Thutmoside period. Moreover, setting aside the problematic and unknown localities like the otherwise completely unknown *Pr-ḥiyn3*, the chronologically latest temple mentioned is the *Ḏsr-3ḫt* of Thutmosis III[95]. In effect, apart from the form "Amen-Re-in-the-Workshop" (if it indeed refers to the Karnak workshop), the West Bank section reads like a description of the sacred landscape of western Thebes in Thutmoside times[96]. This strongly suggests that a motive other than Imiseba's priestly functions and complementary to it might also lie behind the selection of these particular cult-places. Perhaps this other motive or reason is provided by the tomb-chapel itself or to be more precise its location and origin. Thus, while in most cases we are unaware of the causes and circumstances guiding the choosing of a particular tomb for reuse or secondary burial, that of Imiseba represents a unique exception. Namely, the tomb must have been chosen exactly because it was sited on the hill of Sheikh Abd el-Qurna, a part of the necropolis that was most fashionable during the reigns of Hatshepsut and Thutmosis III[97], but not in Imiseba's time when this seems to have been Dra Abu el-Naga. Further considerations must have included the selected tomb's high visibility, and more importantly that it was an "original" tomb of the said era surrounded by similar and it might be added famous elite monuments. It is not difficult to recognise then that we are clearly confronted with a conscious and presumably carefully thought out selection of both location and tomb, the underlying motivation of which was rooted in a trend better known from the early Late Period, namely, archaism[98]. This targeted archaism focusing on the Thutmoside period is also recognisable in certain details of the decorative program and style of the tomb-chapel itself. The inevitable conclusion to be drawn from this therefore is that in a

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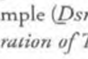
Peet, *Tomb-robberies*, pls. XIV–XVI; N. Strudwick, in: J. Assmann et al. (eds.), *Thebanische Beamtennekropolen*, *SAGA* 12, Heidelberg 1995, pp. 98–105.

[93] Even more so if we consider that many of the scenes or details of scenes in the tomb-chapel of Imiseba were modelled on those of, for example, Medinet Habu, see in general T.A. Bács, in: W.V. Davies (ed.), *Colour and Painting in Ancient Egypt*, London 2001, pp. 94–100.

[94] The absence of these temples also militates against seeking for an itinerary (or itineraries) of processional feasts in the order of the list.

[95] The construction has been dated to between Year 43 and Year 49 of Thutmosis III, see Lipinska, *Deir el-Bahari* II. *The Temple of Tuthmosis III. Architecture*, Varsovie 1977, p. 62. The only element, albeit of questionable analytic value, that might reflect a specifically late Ramesside feature is the use of the term  that according to Černý comes into vogue at this time, Černý, *Community*, p. 76.

[96] Admittedly, the list is incomplete in this respect, as one might expect such significant temples as, for example, the memorial temple of Thutmosis III (*Ḥnkt-ʿnḫ*) or the small Medinet Habu temple (*Ḏsr-st*) to have been included.

[97] P.F. Dorman, *The Tombs of Senenmut. The Architecture and Decoration of Tombs 71 and 353*, *PMMA* 24, New York 1991, p. 22.

[98] This phenomenon has already been recognised to an extent in other late Ramesside tombs (e.g. TT 222), see J. Spiegel, in: *ASAE* 40, 1940, p. 266; also for TT 68, E. Hofmann, in: K.J. Seyfried, *Das Grab des Paenkhemenu (TT 68) und die Anlage TT 227*, *Theben* 6, 1991, p. 88. From the gradually increasing literature on archaism in general, see for example H. Brunner, *LÄ* I, pp. 386–395; R.A. Fazzini, in: *Miscellanea Wilbouriana* 1, Brooklyn 1972, pp. 60–70; P. Der Manuelian, in: *SAK* 10, 1983, pp. 221–245; E.R. Russmann, in: H. DeMeulenaere/L. Limme (eds.), *Artibus Aegypti*, *FS* Bothmer, Bruxelles 1983, pp. 137–146; S. Neureiter, in: *SAK* 21, 1994, pp. 219–254; L. Török, *The Kingdom of Kush. Handbook of the Napatan-Meroitic Civilization*, *HdO*, Abt. 1, Der Nahe und Mittlere Osten, Bd. 31, Leiden – New York – Köln 1997, pp. 189–196.

self-consciously personal style Imiseba placed his own "memorial temple" both in a spatial and temporal sense into the virtual sacred landscape of an idealised past.

In sum, and admitting that all too many questions have had to be left unresolved, the litany section of Imiseba's *Morgenlied* appears to be a composition pieced together from disparate elements (hence sources) with the intention of creating a text the connotations of which play on several levels of meaning.

Abstract

The article's main aim is to contextualise an often referred to text from Theban Tomb 65, which dates to the reign of Ramesses IX. Due to its date the text, a royal offering litany addressed to Amen-Re contained within the larger composition of a so-called *Morgenlied*, has been repeatedly exploited mostly as a source of Theban toponyms. Interpreted within the framework of the tomb-chapel's unique decorative program, however, the text can now be seen as closely relating to the person and intellectual outlook of the tomb-owner Imiseba. It is suggested that it is, in effect, an individualistic expression of self-definition as well as reflective of Imiseba's conceptualisation of his own mortuary monument.

Siedlungen im Kontext der Pyramiden des Alten Reiches[1]

Von Richard Bussmann

Die Frage nach der Einbettung der Pyramiden des Alten Reiches in ihr archäologisches und organisatorisches Umfeld ist Gegenstand des sogenannten 'contextual approach'[2]. P. Posener-Kriéger hat einige dieser logistischen Strukturen an Hand der Abusirpapyri in bestechender Weise offengelegt. Auf archäologischer Seite liefern 17 Fundorte Hinweise auf Siedlungsreste, die in einem lokalen und funktionalen Kontext zu den Pyramiden stehen. Ihre Bewohner waren für die Erbauung, den Kult und die Verwaltung der Pyramiden verantwortlich. Bei der Unterscheidung zwischen Arbeitersiedlungen, Priestersiedlungen und Pyramidenstädten herrscht aber einige Unklarheit. Die nachfolgende Analyse der Fundorte in geographischer Reihenfolge dient daher der Entwicklung einer Siedlungstypologie. Sie führt zu einer Auseinandersetzung mit dem umstrittenen Siedlungstyp Pyramidenstadt.

Archäologische Analyse

Im Zentrum der archäologischen Analyse steht die Ermittlung von Funktion und Organisation der Siedlungen (Tab. 1). Sie bestimmen ihre Größe, Struktur und Gebäudemorphologie. Oftmals ist die Grundrißgestaltung wegen der Architekturlastigkeit vieler Publikationen der einzige Anhaltspunkt für eine Auswertung. Lage und Datierung zeigen die funktionale Zugehörigkeit zu einer Pyramide und deren organisatorischen Strukturen an. Als wesentliche Funktionen lassen sich mit Hilfe der Keramik Kulttätigkeit und an Hand von Öfen, Bearbeitungsabfall und des Werkzeuginventars handwerkliche Tätigkeiten für den Pyramidenbau nachweisen. Die organisatorische Einbettung der Siedlungen betrifft in erster Linie ihre Versorgungsstruktur. Einige Siedlungen sind mit fertigen Lebensmittelrationen versorgt worden, andere hatten Speicheranlagen. Brotmodel zeigen entsprechend, daß in diesen Siedlungen das Getreide vor Ort verarbeitet wurde. Dagegen ist auffällig, daß in den Siedlungen ohne Speicher offene Gefäßformen für den Nahrungsverzehr gegenüber Lagerungsgefäßen wie Biertöpfen und ovoiden Vorratsgefäßen überwiegen. In einigen Fällen können Rückschlüsse auf die Identität, Anzahl und die soziale Formation der Bewohner gezogen werden. Diese Hinweise sind insofern besonders wertvoll, als hinter der Siedlungstypologie die Frage nach der Organisation der Bewohner steht.

1. Medum: Nur die etwa 300 m lange Mauer am Fuße des Aufwegs zur Pyramide[3] bietet einen Anhaltspunkt für die Lokalisierung einer Siedlung. Die Interpretation als Umfassungsmauer der noch im

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[1] Der Artikel basiert auf meiner gleichnamigen Magisterarbeit, die ich 2002 beim Fachbereich für Geschichts- und Kulturwissenschaften der Freien Universität Berlin eingereicht habe. Herrn Prof. Dr. Stephan J. Seidlmayer und Herrn PD Dr. Malte Römer gilt mein besonderer Dank für die gute Betreuung der Arbeit.

[2] M. Lehner, in: *AfO* 32, 1985, S. 136–158; ders., in: *MDAIK* 41, 1985, S. 109–143.

[3] V. Maragioglio/C. Rinaldi, *L'architettura delle piramidi menfite III. Il Complesso di Meydum, la Piramide a Doppia Pendenza e la Piramide Settentrionale in Pietra di Dahsciur*, Rapallo 1964, S. 30–31, tav. 2, fig. 1.

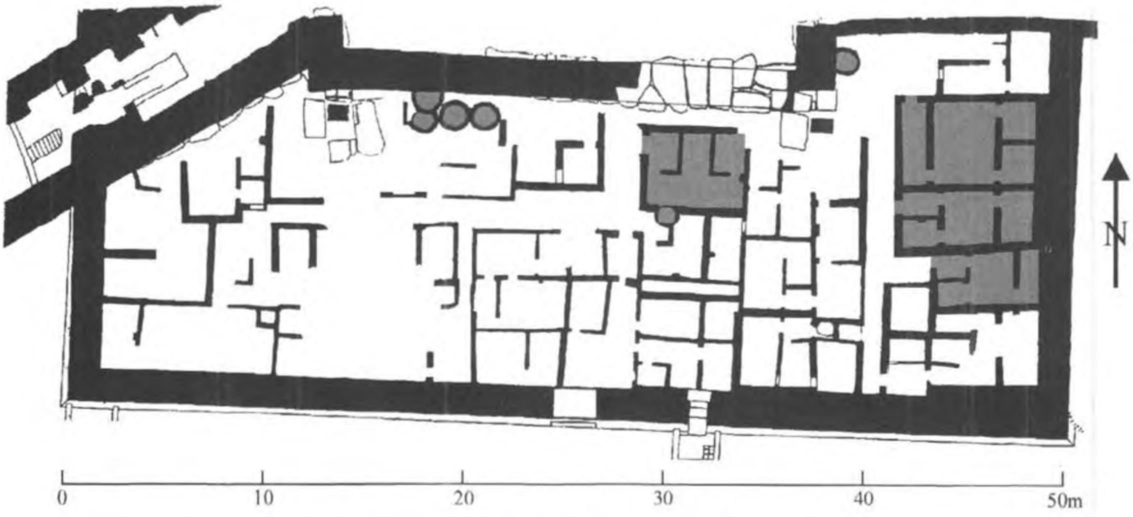

Abb. 1: Priestersiedlung im Taltempel der Knickpyramide.
Die im Text besprochenen Haustypen und die runden Getreidesilos sind grau unterlegt (nach Fakhry, *Sneferu II/1*, Fig. 4)

Mittleren Reich bezeugten Pyramidenstadt *Ḏd-Snfrw*[4] wird aber durch keine weiteren Funde oder anstoßendes Mauerwerk bestätigt.

2. Taltempel der Knickpyramide (Abb. 1): A. Fakhry entdeckte im Süden des Tempelbezirks auf einer Fläche von 760 m^2 etwa 20 Häuser[5]. Die Siedlung ist im östlichen Teil in drei Blöcke gegliedert, deren Häuser zwischen 14 m^2 und 60 m^2 groß sind. Drei Dreistreifenhäuser des östlichen Blocks repräsentieren Wohnhausarchitektur[6]. Im westlichen Häuserblock ähnelt ein Haus mit Querraum und drei Schmalräumen dem Typ A der Wohnhäuser in Tell ed-Dabʿa, doch ist die Anordnung der Durchgänge eine völlig andere[7]. An diesen Häuserblock grenzt ein 72 m^2 großes Gebäude, das vermutlich zwei Häuser umfaßt. Im Eck zum oberen Aufweg liegen ein oder zwei Wohneinheiten, die gemeinsam 52 m^2 groß sind. Der Mauerverlauf der übrigen Häuser ist unklar. Innerhalb der Siedlung sind sechs runde Getreidesilos verteilt, vier davon lehnen an die Südwand des Steintempels an. Sie werden von einem 95 m^2 großen Verwaltungsgebäude umgeben. Die Weiterverarbeitung des Getreides zu Brot ist an den zahlreichen Brotmodeln aus den Abfallhaufen der Siedlung abzulesen.

Der Kult im Taltempel ist durch Stelen, Altäre und weitere Inschriften für das Alte und Mittlere Reich bezeugt. Die Keramik dagegen weist keine Formen des Mittleren Reiches auf. Keramisches Vergleichsmaterial der Ersten Zwischenzeit aus dieser Region bieten die Schachtgräber in Saqqara-Nord. Als chronologisch sensible Leitform sind die Vorratsgefäße durch eine Längung der Gefäßkörper und das Auftreten gelängter Gefäßhälse in zylindrischer oder trichterartiger Form gekennzeichnet[8]. Der Großteil der Vorratsgefäße aus dem Taltempel der Knickpyramide hat eine gestauchte, breitbauchige Form ohne Längung der Gefäßhälse. Die Vorratsgefäße mit gelängtem Hals lassen sich jeweils mit Formen des Alten Reiches parallelisieren[9]. Demnach ist die Laufzeit der Siedlung auf das Alte Reich beschränkt.

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[4] V. Maragioglio/C. Rinaldi, in: *Or* 40, 1971, S. 67–74. Zur Lage der Pyramidenstädte in der Nähe der Taltempel vgl. R. Stadelmann, in: *RdE* 33, 1981, S. 75.

[5] A. Fakhry, *The monuments of Sneferu at Dahshur II. The Valley Temple, 1–2*, Kairo 1961 (im folgenden zitiert als Fakhry, *Sneferu II/1–2*); Ders., in: *ASAE* 52, 1954, S. 571–593, §§ 6–13. Die Bezeichnung des Tempels, der auf halber Höhe des Aufweges liegt, als Taltempel lehnt sich an die Terminologie Fakhrys an.

[6] von Pilgrim, *Elephantine XVIII*, S. 190–196, Abb. 83f–g.

[7] M. Bietak, in: Ders. (Hg.), *Haus und Palast im Alten Ägypten*, *UÖAI* 14, Wien 1996, S. 23–37, Fig. 1, Typ IIIa (im folgenden zitiert als Bietak, *Haus und Palast*).

Die Knickrandschalen aus dem Taltempel markieren die Eckpunkte der Datierung. Die flache Form mit scharfkantiger Schulter (Simpson, fig. 5–7) datiert in die 4. Dynastie[10], während die Schale mit einer scharfkantigen Einziehung unmittelbar unterhalb der Mündung und runder Schulter (Simpson, fig. 5–5) eine Form der 6. Dynastie ist[11]. Im Keramikkorpus des Tempels fehlen wie im Korpus der Mykerinospyramide und des Sonnenheiligtums des Userkaf[12] Schalen mit Innenleiste, die aber in Fundkomplexen vom Anfang und der Mitte der 4. Dynastie noch bezeugt sind[13]. Der Tempelbezirk wurde nach Ausweis der Keramik frühestens ab der Zeit von Mykerinos besiedelt.

Simpson schätzt die Gesamtzahl der Biertöpfe auf 3000, von denen nur wenige aus dem Pyramidentempel stammen. Neben den zahlreichen, bislang unpublizierten Siegelabdrücken aus dem Taltempel[14] unterstreicht dieser Befund, daß die Verwaltung des Totenkultes in den Lehmziegelbauten im Süden des Taltempels ansässig war. Dabei wären in der Nähe des Getreidespeichers innerhalb der Pyramidenumfassungsmauer vermehrt Spuren von Verwaltungstätigkeit zu erwarten[15]. Die einfachen, rundbodigen Schalen sind ebenfalls nur im Taltempel gefunden worden. Sie fanden keine Verwendung beim Kult an der Pyramide, sondern nur bei den Mahlzeiten der Bewohner des Taltempels. Im Pyramidentempel, an der Nordseite der Pyramide und der Ostseite der Nebenpyramide treten konzentriert Modellopfergefäße, flachbodige Kannen mit Tülle (ägyptisch *nms.t*) und flachbodige Schalen mit ausladendem Rand auf. Diese Kultkeramik war in den drei Abfallhaufen des Taltempels mit Lagerungsgefäßen, Brotmodeln und Eßgeschirr vergesellschaftet. Die Keramik spiegelt damit das Ineinandergreifen von Kultvollzug und Wohnbereich wider.

Die summarische Publikation der Flintgeräte, einer Beilklinge, drei Schabern, Messern und verschiedener Klingentypen[16], läßt keine kohärente Rekonstruktion des Werkzeuginventars der Siedlung zu.

3. Taltempel der Roten Pyramide: An der Talmündung der Roten Pyramide stieß L. Borchardt auf die Mauerkrone der Umfassungsmauer des Taltempels[17]. Die aktuellen Bohrungen, die in dessen

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[8] Seidlmayer, *Gräberfelder*, S. 383–384, Abb. 163.

[9] W.K. Simpson, in: Fakhry, *Sneferu II/2*, fig. 1–4 = *Qau and Badari II*, pl. LXXX,71Y und 71Z und G.A. Reisner, *Mycerinus. The temples of the third pyramid at Giza*, Cambrigde, Mass. 1931, fig. 65, 3 (im folgenden zitiert als Reisner, *Mycerinus*); W.K. Simpson, fig. 1–7 = Reisner, *Giza* II, S. 71 und fig. 86, 35-7-23.

[10] D. Faltings, in: *MDAIK* 45, 1989, S. 145, Abb. 9b, A4; K. Kromer, *Siedlungsfunde aus dem frühen Alten Reich in Giseh. Österreichische Ausgrabungen 1971–1975, DÖAW, Philosophisch-historische Klasse*, Band 136, Wien 1978, Taf. 23, 4 (im folgenden zitiert als Kromer, *Siedlungsfunde*).

[11] W. Kaiser, in: Ricke, *Userkaf-SH II*, Abb. 10, Gefäß 35-12-46; Alexanian, *Dahschur II*, S. 112, Anm. 545.

[12] Reisner, *Mycerinus*, S. 202–229; W. Kaiser, in: Ricke, *Userkaf-SH II*, S. 49–82.

[13] S.J. Seidlmayer, in: D. Mendel/U. Claudi (Hg.), *Ägypten im afro-orientalischen Kontext. Aufsätze zur Archäologie, Geschichte und Sprache eines unbegrenzten Raumes, Gs P. Behrens*, Köln 1991, S. 341–342, Abb. 2, 1 und 2 (im folgenden zitiert als *Gs Behrens*); Ginter et al., *El-Târif Kleinfunde*, S. 77; Kromer, *Siedlungsfunde*, Taf. 23, 1.5; K. Kromer, *Österreichische Ausgrabungen in Giseh (VAR). Vorbericht über die Frühjahrskampagne 1971, SÖAW, Philosophisch-historische Klasse*, Band 279, 5. Abhandlung, Wien 1971, Taf. 5, 3; 17, 11; 18, 6 (im folgenden zitiert als Kromer, *Vorbericht*); *workmen's barracks* im Westen der Chefrenpyramide, vgl. M. Lehner/N.J. Conard, in: *JARCE* 38, 2001, S. 42.

[14] Aus dem Pyramidenbezirk ist nur ein Siegelabdruck bekannt: W. Helck, in: *GM* 119, 1990, S. 43.

[15] A. Fakhry, in: *ASAE* 52, 1954, S. 568–569, § 4 erwähnt „a few fragments of Old Kingdom pottery jars".

[16] A. Fakhry, *Sneferu II/2*, pls. 41–42.

[17] L. Borchardt, in: *ZÄS* 42, 1905, S. 1–11; R. Stadelmann, in: *RdE* 33, 1981, S. 71.

Umgebung durchgeführt werden, haben auf einer Länge von 200 m von Norden nach Süden und 130 m von Osten nach Westen Siedlungsmaterial des Alten und Mittleren Reiches zutage gefördert[18]. Aus den Schichten des Alten Reiches stammen Granitfragmente, die auf Werkstattätigkeit für die Steingräber der Nekropole hinweisen, und eine Modellopferschale als Indiz für Kulttätigkeit. Ohne Zweifel sind Bereiche der Pyramidenstadt angebohrt worden. Sie war auch im fortgeschrittenen Mittleren Reich bewohnt, obgleich das Siedlungsmaterial des Mittleren Reiches vielerorts durch eine 1,5 m dicke sterile Sandschicht von dem des Alten Reiches getrennt war.

4a. Arbeitshaus der Roten Pyramide: Das Arbeitshaus im östlichen Vorfeld der Roten Pyramide[19] ist ein offener Hof von 27 m x 38 m, der im Westen durch Mäuerchen in schmale Parzellen unterteilt ist. Die vier Keramiköfen sind mit Abfallprodukten des Arbeitshauses befeuert worden[20]. Die Keramik zeugt von dem kurzfristigen Betrieb des Werkplatzes[21]. Im Typenbestand dominieren offene Formen für den Nahrungsverzehr und Ständer zur Bereitstellung der Gefäße. Geschlossene Gefäße zur Lagerung sind schwach vertreten, und Brotmodel und Biertöpfe fehlen völlig. Die Statistik der Keramikformen schärft das Profil des Arbeitshauses als Produktionsstätte. Die Arbeiter haben sich hier nur zur Arbeit aufgehalten und sind von außen mit fertigen Lebensmittelrationen versorgt worden. Daher fehlen dem Arbeitshaus eigene Getreidespeicher. Die Bandbreite an Werkzeugen aus dem Arbeitshaus ist gering[22]. Während Schlaginstrumente wie Fäustel, Hämmer und klobig-runde Geräte den Großteil des Werkzeugbestandes ausmachen, sind die für Wohnsiedlungen typischen Schab- und Schnittinstrumente nicht gefunden worden.

4b. Arbeitersiedlung der Roten Pyramide: Im Wadi südlich der Pyramide liegen zwei schmalrechteckige Baracken mit je vier etwa 5 m x 5 m großen Räumen[23]. Ähnliche Strukturen verzeichnet G. Erbkam im Osten der Pyramide, doch haben die Grabungen des DAI Kairo hier keine entsprechenden Mauerzüge freigelegt. Das Typeninventar der Gefäße entspricht dem des Arbeitshauses. Wie schon aus dem Fehlen eigener Getreidespeicher geht daraus die externe Versorgung mit fertigen Rationen hervor. Der Kalksteinsplitt auf der gesamten Grabungsfläche rührt von der Kalksteinbearbeitung vor Ort her. Diese 'Baustellensiedlung' war nach Ausweis der Keramik nur kurz in Betrieb.

5. Pyramidenbezirk der Udjebten: Auf der 1200 m² großen Fläche innerhalb der Umfassungsmauern liegen verstreut mindestens sechs Wohnbauten, die zwischen 14 m² und 50 m² groß sind[24]. Zwei der Häuser gehören zum Typ Dreistreifenhaus. Die Bewohner haben auf den Einbau eigener Speichervorrichtungen verzichtet. Das chronologische Verhältnis der Gebäude zu den Grabschächten rund um die Pyramide ist unklar. Die Lage der Häuser im Pyramidenbezirk spricht dafür, daß die Priester der Udjebten in ihnen gewohnt haben. Ihr Kult ist durch ein Dekret vom Ende der Regierungszeit

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[18] N. Alexanian/S.J. Seidlmayer, in: *MDAIK* 58, 2002, S. 1–28.

[19] R. Stadelmann, in: *MDAIK* 38, 1982, S. 384–385; ders., in: *MDAIK* 39, 1983, S. 228; ders., in: *MDAIK* 49, 1993, S. 263–267, Abb. 4.

[20] S.J. Seidlmayer wies mich dankenswerterweise darauf hin, daß das Arbeitshaus mit einer Schicht von Holzsplittern, aufgeribbelten Seilen u.ä. bedeckt war, die Verwendung als Brennmaterial gefunden haben könnten.

[21] D. Faltings, in: *MDAIK* 45, 1989, S. 133–154.

[22] C. Eger, in: *MDAIK* 50, 1994, S. 35–42. Eger macht vor allem auf die Kalksteinbearbeitung für das Königs- und die Beamtengräber aufmerksam. Hinzu kommt die Holzverarbeitung, die sich in der Schicht aus Holzsplittern und dem Fund von Steinbeilen (R. Stadelmann, in: *MDAIK* 38, 1982, S. 384) manifestiert.

[23] H. Ernst, in: *MDAIK* 49, 1993, S. 291–294. G. Erbkam (in: *LD* I, Blatt 35) skizziert hier unmaßstäblich zwei Baracken mit je vier quadratischen Räumen, die jüngeren Grabungen zeigen einen mindestens 35 m langen Mauerzug. Die genaue Anzahl und Größe der Baracken bleibt damit etwas unklar.

[24] G. Jéquier, *La pyramide d'Oudjebten. Fouilles Saqq.*, Kairo 1928, S. 24–31.

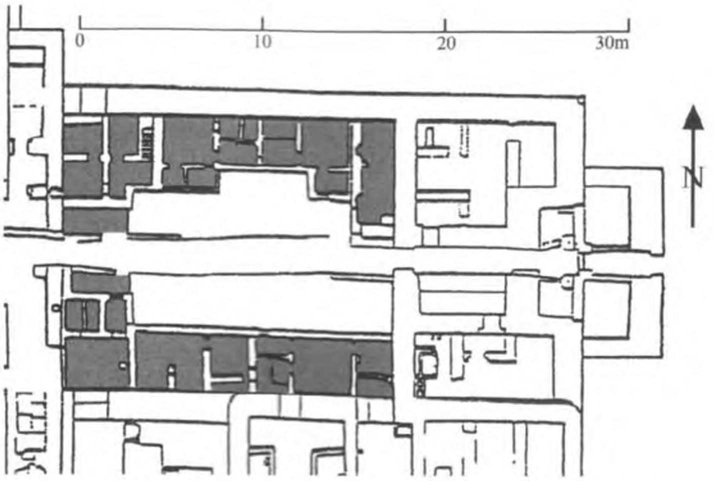

Abb. 2: Priestersiedlung im Pyramidentempel des Neferefre.
Die Priesterräume sind grau unterlegt (nach M. Bárta, in: *Památky archeologické* 87, 1996, Abb. 1)

Pepis II. bekannt[25]. In dem Dekret ist ein Mann namens *Ỉḳrj* erwähnt, der auf einer Opfertafel aus dem Pyramidenbezirk zusammen mit anderen Priestern genannt ist[26]. Die übrigen inschriftlichen Objekte des Pyramidenbezirks und die *stèles-maisons* nennen keine weiteren Priester der Udjebten. Letztlich ist es aber nicht möglich, einen festen Zusammenhang zwischen dem prosopographischen Material und den Ziegelgebäuden herzustellen.

6. Pyramidentempel des Neferirkare: Auf 675 m² verteilen sich südlich und westlich des Pyramidentempels etwa zehn Wohneinheiten, darunter ein Dreistreifenhaus und ein Dreiraumhaus (je 35 m²)[27]. Runde Getreidespeicher sind nicht eingebaut worden, und entsprechend dokumentiert das Papyrusarchiv des Tempels die Versorgung des Kultpersonals überwiegend mit fertigen Broten[28]. Die Größe der Siedlung, die wohl zusammen mit dem Totenkult am Ende des Alten Reiches aufgegeben wurde, schließt eine Dauerbewohnung aller 250 bis 300 Priester aus[29]. Nur die 25 bis 30 Priester im Dienst haben hier Platz gefunden. Die Funde der Siedlung sind nicht aufgearbeitet publiziert.

7. Pyramidentempel des Neferefre (Abb. 2): Die Priesterräume lehnen sich kranzförmig an die Innenwände des 300 m² großen Hofes vor dem inneren Tempel an[30]. Haustypen lassen sich nicht erkennen. Die Räume sind gemäß der keramischen Analyse einige Zeit nach Errichtung des Tempels eingebaut und bis zum Ende des Alten Reiches bewohnt worden. Nach den Modellopfergefäßen sind Schalen der am stärksten vertretene Keramiktyp (33,63%), gefolgt von Biertöpfen und ovoiden Vorratsgefäßen (15,52%). Brotmodel und *ʿpr.t*-Backplatten machen nur 5,34% aus. Die Priesterräume dienten damit vornehmlich dem Verzehr. Die Priester haben selbst kaum Getreide zu Brot und Bier weiterver-

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[25] Goedicke, *Königl. Dokumente*, S. 154–155, Abb. 13.

[26] G. Jéquier, *a.a.O.*, fig. 31.

[27] Borchardt, *Neferirkere*, S. 11–12 und 36–37, Blatt 10. Zur Gebäudemorphologie vgl. von Pilgrim, *Elephantine XVIII*, Abb. 82b und 83b.

[28] P. Posener-Kriéger, *Les archives du temple funéraire de Néferirkarê-Kakaï (Les papyrus d'Abousir). Traduction et commentaire II, BdE* 65,2, Kairo 1976, S. 323–339 und 405–412.

[29] Ebd., S. 572–574; Laufzeit des Totenkults: S. 483 und 637–641.

[30] M. Bárta, in: *Památky archeologické* 87, 1996, S. 137–160.

arbeitet, sondern sind von außen mit fertigen Lebensmittelportionen versorgt worden. Die unmittelbare Abhängigkeit vom Totenkult spiegelt auch das Fehlen von Getreidespeichern in der Siedlung selbst. Insgesamt ist die Versorgungsstruktur mit derjenigen der Priestersiedlung am Tempel des Neferirkare vergleichbar[31]. Die lokale, statistische und chronologische Verteilung der Keramikformen dürfte daher in beiden Siedlungen ähnlich sein.

8. Pyramidentempel der Chentkaus in Abusir: Nutzspuren in Form von Asche, Holzkohle, Flintmessern, Muscheln, Strohbüscheln, Siegelabrollungen und einer Bastmatte weisen auf eine sekundäre Bewohnung des Raumes NE-4 im Nordosten des Tempels hin[32]. Eine Siedlung ist nicht entstanden, da der Kult für Chentkaus von dem des Neferirkare abhing[33].

9. Sonnenheiligtum des Userkaf: Das 320 m^2 große Gebäude südlich des oberen Heiligtums war praktisch fundleer und entzieht sich daher einer genauen Deutung[34]. Gegen die Interpretation als Magazin spricht, daß die Magazine im Sonnenheiligtum des Niuserre und bei den Tempeln der Pyramiden in den Baukörper integriert sind und innerhalb der Umfassungsmauer liegen. Die Feuerstellen in dem Gebäude sind eher ein Hinweis auf eine Wohnnutzung. Morphologisch entspricht das symmetrisch angelegte Gebäude aber weder geplanter Wohnhausarchitektur (siehe unten, Nr. 13) noch Magazinräumen, die sich durch eine repetitive Anordnung gleich geschnittener Räume auszeichnen.

10. Werkstätten in Giza-Süd (Abb. 3): 100 m südlich vom Aufweg zur Mykerinospyramide ist auf einer Fläche von 240 m x 100 m eine dreifach geknickte Mauer mit Werkstattgebäuden zu beiden Seiten freigelegt worden[35]. Im Norden stehen drei Gebäude aus je zwei schmalen Galerien, deren rückwärtiger Teil kleinteilig parzelliert ist. Eines der Gebäude (H13) weist parallel zu den Längswänden eine Reihe von Pfeilersockeln auf. Die Gebäude H5 und H7 sind wie das Arbeitshaus in Dahschur offene Höfe, die Öfen in H9 und in H2 und H3 schließen eine Wohnnutzung aus. Der freistehende Planbau H8 könnte ein Verwaltungsgebäude sein. Die Gebäude H10, H6 und H1 haben einen Querraum mit drei parallelen Längsräumen und ähneln dem Dab'a-Wohnhaustyp A (siehe oben, Nr. 2). Andere Hinweise auf eine Wohnnutzung liegen nicht vor.

Der Produktionscharakter des gesamten Platzes wird an der Vielzahl der (Keramik?-)Öfen und an Hartgesteinbrocken auf dem freien Platz neben H9 und H10 deutlich. Im Süden dieses Platzes stoßen acht parallele Mauerzungen an die große Bruchsteinmauer. Ähnlich wie im Arbeitshaus von Dahschur formen sie schmale Parzellen. Auch die Versorgungsstruktur entspricht der des Arbeitshauses, da eigene Getreidespeicher nicht nachgewiesen sind.

Die Verteilung der Gebäude spricht gegen eine Interpretation als geschlossene Siedlung mit Umfassungsmauer. Eine dichte Bebauung mit Straßennetz ist nicht entstanden. Die Gebäude lehnen sich mit Ausnahme von H8 alle an die große Mauer an. Als Produktions- und Zulieferstätten gruppierten sie sich nach und nach um die Mauer, die mit 2,90 m Breite eine Konstruktionsrampe gewesen sein könnte. Eine chronologische Zuordnung zur Chefren- oder Mykerinospyramide ist wahrscheinlich[36].

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[31] P. Posener-Kriéger, in: *Fs Mokhtar II*, S. 195–210; dies., in: S. Schoske (Hg.), *Akten des Vierten Internationalen Ägyptologen-Kongresses in München 1985. Band 4. Geschichte – Verwaltungs- und Wirtschaftsgeschichte – Rechtsgeschichte – Nachbarkulturen, SAK Beihefte* 4, Hamburg 1991, S. 167–176; dies., in: *MDAIK* 47, 1991, S. 293–304.

[32] M. Verner, *Abusir III. The Pyramid Complex of Khentkaus*, Prag 1995, S. 27–28 und S. 15, Abb. 3b.

[33] P. Posener-Kriéger, in: *JSSEA* 13, 1983, S. 51–57.

[34] Ricke, *Userkaf-SH II*, S. 26–28, Plan 3 und 6.

[35] A.-A. Saleh, in: *MDAIK* 30, 1974, S. 131–154.

[36] M. Lehner, in: *AfO* 32, 1985, S. 156–157.

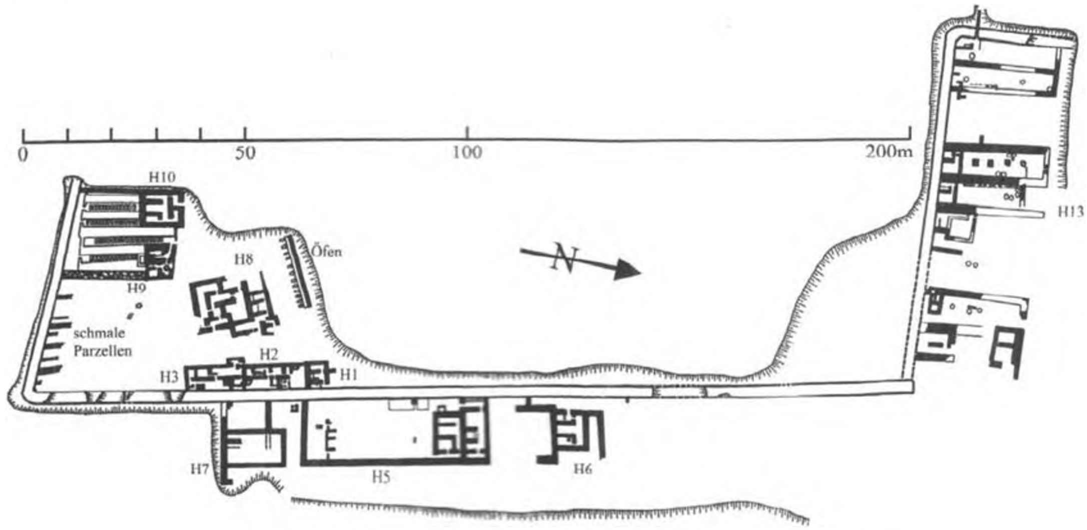

Abb. 3: Werkstätten in Giza-Süd (nach A. Saleh, in: *MDAIK* 30, 1974, fig. 2)

11. Siedlungsschutt in Giza-Süd: K. Kromer hat südlich des Mykerinosaufweges 1550 m³ Abraum einer Siedlung ausgegraben, die für den Bau der Mykerinospyramide abgerissen worden ist[37]. Er datiert den Beginn der Siedlung mit Hinweis auf ein Rollsiegel aus Holz und die *tête-bêche*-Anordnung auf Siegelabdrücken fälschlicherweise in die Thinitenzeit. Holz ist zwar kein gängiges Material für Rollsiegel im Alten Reich, doch sind einige Exemplare bekannt[38]. Die *tête-bêche*-Anordnung ist durch das ganze Alte Reich hindurch zu verfolgen und bleibt auf Roll- und Knopfsiegeln am Ende des Alten Reiches als Motiv erhalten[39].

Die Keramik schließt Kromers Frühdatierung aus. Die Brotmodel haben eine Blumentopf-Form mit ebenen Innenwänden[40], während flache Model und Formen mit Kerbe in der Innenwand, die in Siedlungskontexten bis zum Ende der 3. Dynastie auftreten, fehlen[41]. Die frühen Knickrandschalen sind im

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[37] Kromer, *Siedlungsfunde*; Kromer, *Vorbericht*. K. Butzer, in: *JNES* 41, 1982, S. 140–141 vermutet, es handele sich um den Schutt von zwei Siedlungen, doch läßt sich die Vermutung auf der Grundlage der Publikationen von Kromer nicht weiter erhärten. Die Siegelabdrücke und das Rollsiegel sind vollständig publiziert worden von P. Kaplony, *Die Rollsiegel des Alten Reiches* II. *Katalog der Rollsiegel, MonAeg 3A und 3B*, Brüssel 1981, s.v. *Ḫw-f-w* 25-28, *Rʿ-ḫʿ-f* 44–88, K.U. 201–216, F 126, 142–196 (im folgenden zitiert als Kaplony, *Rollsiegel*). Sein Numerierungssystem wird nachfolgend übernommen.

[38] *Mn-kꜣw-Ḥr* 4; F 11 (Taf. 153) stammt aus dem Pyramidentempel von Neferirkare, vgl. H.G. Fischer, in: *MMJ* 6, 1972, S. 5–16, Fig. 4; D. Bidoli, in: *MDAIK* 28, 1973, S. 184–185.

[39] *Ḏd-kꜣ-Rʿ.w* 35 (= H.G. Fischer, in: *MMJ* 6, 1972, Fig. 1–2) datiert unter Asosi. Aus Abusir stammen F 11 (Taf. 153) und F 17 (Taf. 154), aus Abu Gurob F 13 (Taf. 153). Aus der Mastaba des *ꞽImꜣ-Ppj* in Balat ist die Anordnung ebenfalls bekannt, vgl. M. Vallogia, *Le monument funéraire d'IMA-PEPY/IMA-MERYRÊ. Balat IV. FIFAO* 38, Kairo 1998, pls. LXXVIII–LXXXVIII, Nr. 2948, 2950, 2951, 2961, 2963, 3129.

[40] Kromer, *Siedlungsfunde*, Taf. 20, 1.2.4.

[41] Flache Brotmodel: C.M. van den Brink et al., in: *MDAIK* 45, 1989, S. 77 und Fig. 13; stratifizierte Formen aus Buto: Köhler, *Buto* III, Taf. 42, 1–2; 44, 1.5; 46, 4–5; vgl. auch S. Hendrickx et al., in: *MDAIK* 58, 2002, S. 294–295 und Abb. 5. Innenwände mit Kerbe: D. Raue, in: *MDAIK* 55, 1999, S. 173–189, Abb. 34, 3. Diese Form läuft in Raues Material erst zu Beginn der 3. Dynastie aus. Auch die stratifizierten Brotformen mit Knick in der Innenwand aus Buto datieren in diese Zeit, vgl. Köhler, *Buto* III, Taf. 45, 2–4; 46, 3. Die Form mit Knick aus der Nordwest-Stadt von Elephantine, Stratum D2, stammt sogar aus dem Ende der 3. Dynastie, vgl. S.J. Seidlmayer, in: Bietak, *Haus und Palast*, S. 201, Abb. 4, links oben. Die Form A. Wodzinska, in: *MDAIK* 56, 2000, S. 157, Abb. 10, 1 ist nicht absolut datiert oder stratigraphisch fixiert.

Gegensatz zum Kromer-Korpus extrem tiefbauchig[42]. Schalen mit Innenleiste sind zur Zeit ihres ersten Auftretens recht steilwandig mit hoch ansetzender Leiste. Im Verlauf der 3. Dynastie verflachen die Schüsseln, und die Leiste rutscht tiefer[43]. Die entsprechenden Formen des Siedlungsschutts haben zwar eine hoch sitzende Leiste, sind aber alle recht flach[44]. Die Königsnamen auf den Siegelabdrücken Cheops' und Chefrens markieren folglich den Beginn und das Ende der Siedlung.

Im keramischen Korpus dominieren einfache Schalen, Knickrandschalen, Biertöpfe und Brotmodel. Letztere zeigen, daß die Bewohner Brot und Bier selbst hergestellt und vor Ort gelagert haben. Kultkeramik in Form von Modellopfergefäßen, *nms.t*-Kannen und den dazugehörigen flachbodigen Schalen ist nicht gefunden worden. Damit setzt sich die Siedlung von Priestersiedlungen ab.

Die größte Gruppe der Flintwerkzeuge bilden mit 260 Stück die Schnittwerkzeuge, zu denen „Einsatzklingen", „breite, rechteckige Klingen", „Klingen-Doppelschaber" und „Spitzklingen" gehören. Angaben über Sichelglanz macht Kromer nicht. Mit 161 von insgesamt 723 Steingeräten (22,3%) ragen Messer als geschlossene Gruppe heraus. Sie verteilen sich recht gleichmäßig über die Grabungsquadranten (29,6% bis 17,5% der Werkzeuge) und gehörten offensichtlich zur alltäglichen Haushaltsausstattung. Als dritthäufigster Typ folgen „Dreiecksschaber" (113 Stück), weitere Typen sind Bohrköpfe (Kromers „Schaftstrecker"), Sägen, Abschläge und schwere Arbeitsgeräte. Die große Bandbreite der Typen beweist die Mannigfaltigkeit der handwerklichen Tätigkeiten in der Siedlung. Es ist keine handwerkliche Monokultur, in welcher einzelne Typen massiv auftreten und andere völlig fehlen[45]. Die Bewohner der Siedlung haben hier nicht nur gearbeitet, sondern auch gewohnt und gewirtschaftet. In diesem Zusammenhang ist der Fund von zwei Spinnwirteln aufschlußreich[46]. Da Spinnerei Frauentätigkeit war[47], müssen Frauen in der Siedlung gewohnt haben. Die soziale Formation der Bewohner ist folglich die Familie.

Als Wohnsiedlung teilt Hierakonpolis diese Charakteristika. Aus den 27 Fundkomplexen, die B. Adams mit Sicherheit dem Wohngebiet zuordnen konnte, stammt keine Kultkeramik, und Spinnwirtel und Messer treten regelmäßig auf[48]. Aus der Alten-Reichs-Siedlung von Kom el-Hisn sind nach den Klingen ebenfalls Messer als zweithäufigster retuschierter Werkzeugtyp geborgen worden[49].

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[42] Kromer, *Vorbericht*, Taf. 5, 5–6; 17, 1–9; 18, 3; 23, 7.9; Kromer, *Siedlungsfunde*, Taf. 21, 5.7–8 (= Kromer, *Vorbericht*, Taf. 18, 2); 23, 4 (= Kromer, *Vorbericht*, Taf. 17, 10). Frühe Knickrandschalen: D. Raue, in: *MDAIK* 55, 1999, Abb. 37, 1; 38, 1 (Anfang bis Mitte der 3. Dynastie); S.J. Seidlmayer, in: Bietak, *Haus und Palast*, S. 201, Abb. 4, vierte und fünfte Form von oben links (Ende der 3. Dynastie); Köhler, *Buto* III, Taf. 30, 3 (1. Dynastie); Alexanian, *Dahschur* II, S. 147, Anm. 756.

[43] D. Raue, in: *MDAIK* 55, 1999, Abb. 37, 3–6 und 39, 5–7. Steilwandige Exemplare mit hoch sitzender Leiste sind in der Nordwest-Stadt von Elephantine noch am Ende der 3. Dynastie belegt, vgl. S.J. Seidlmayer, in: Bietak, *Haus und Palast*, S. 201, Abb. 4, Formen links unten. Die Formen des jüngeren Stratums C sind bereits flacher und haben eine tiefere Leiste, vgl. Seidlmayer, in: *Gs Behrens*, Abb. 2, 1.2. Die Formen aus Buto stammen alle aus Schicht VI (3./4. Dynastie) und lassen daher keinen Formenwandel innerhalb dieses Zeitraumes erkennen. Zur Diskussion des Formwandels dieser Schalen vgl. Alexanian, *Dahschur* II, S. 144–147.

[44] Kromer, *Vorbericht*, Taf. 5, 3; 17, 11; 18, 6; Kromer, *Siedlungsfunde*, Taf. 23, 1.5 (= Kromer, *Vorbericht*, Taf. 18, 8).

[45] In Umm es-Sawan sind im wesentlichen Handstichel und Bohrköpfe zur Aushöhlung von Kalksteingefäßen gefunden worden, vgl. G. Caton-Thompson/E.W. Gardner, *The desert Fayum*, Gloucester 1934, S. 104–105.

[46] Kromer, *Siedlungsfunde*, Taf. 34, 9.11.

[47] C. Strauss-Seeber, *LÄ* V, Sp. 1156, s.v. *Spindel, Spinnen*.

[48] B. Adams, *Ancient Hierakonpolis*, Warminster 1974: 4 Spinnwirtel (No. 180); dies., *Ancient Hierakonpolis. Supplement*, Warminster 1974: mindestens 6 Spinnwirtel (No. 89, 145, 172[2x], 211[2x]), 8 Flintmesser (No. 85, 89[2x], 171, 180[3x], 211); dies., *Ancient Nekhen. Garstang in the City of Hierakonpolis, Egyptian Studies Association Publication* 3, Whitstable 1995: 4 Spinnwirtel (Fundortgruppe 303T, 304T[2x], 316), 3 Flintmesser (Fundortgruppe 303T, 304T, 316).

[49] R.J. Wenke/P.E. Buck/H.A. Hamroush/M. Kobusiewicz/K. Kroeper/R.W. Redding, in: *JARCE* 25, 1988, S. 28, Abb. 13c–d.

F. Spurrell weist auf die hohe Zahl an Messern aus Kahun hin[50]. Die statistische Verteilung von Werkzeugtypen im Siedlungsgebiet von Abydos und Ayn Asil ist nicht bekannt[51]. Im Siedlungsgebiet von Elephantine der 1.–6. Dynastie dagegen sind Messer unter den Geräten extrem schwach belegt[52]. Ähnlich verhält es sich in Buto und Maadi, in dessen Fundrepertoire Spinnwirtel aber besonders zahlreich sind[53]. In diesen Fällen kann die Verwendung von Metallmessern nicht ausgeschlossen werden. Während Messer sich folglich nicht dazu eignen, den Wohncharakter einer Siedlung zu erfassen, liefern Spinnwirtel einen wertvollen Hinweis auf die soziale Formation der Haushalte. Daneben könnten weitere Objekte der Kromer-Siedlung auf einen stärkeren Wohncharakter hinweisen, etwa Schmuck, Steingefäße als Luxusgüter, sogenannte 'Spielsteine', Schminkpaletten (?) und figürliche Abbildungen[54].

Die Auswertung der administrativen Angaben auf den Siegelabrollungen ergibt kein kohärentes Bild. Die Siedlung steht mit einer *wʿb.t*, der königlichen Kornverwaltung und der ansonsten unbekannten Institution *š-nfrw-[Ḫw-f-w]* in Kontakt (*Ḫw-f-w* 27, *Rʿ-ḫʿ-f* 59, *Ḫw-f-w* 25, K.U. 203, *Ḫw-f-w* 28). Die Abrollungen nennen sechs Schreibertitel, von denen *zš-ʿ-njswt* am häufigsten auftritt (*Rʿ-ḫʿ-f* 48, 49, 54, 56, 61, 70, 72, 77, 87). Sicher belegt ist weiterhin der Titel *wʿb-njswt* (*Rʿ-ḫʿ-f* 50, 53, 58). Kein Titel ist ranghoch. Das Siegelmaterial kann die Identifizierung der Siedlung als Pyramidenstadt des Cheops[55] weder be- noch widerlegen. Allerdings wird sie weiter im Norden bei dem Taltempel unter Nazlet es-Samman vermutet[56]. Außerdem existierte diese auch nach der Errichtung der Mykerinospyramide weiter, als die Siedlung bereits abgerissen war[57]. Gleichwohl gehört die Siedlung auf Grund ihrer Lage und Datierung in die logistischen Strukturen des Pyramidenbaus. Hier sind die Familien der Arbeiter für die ersten beiden Pyramiden von Giza angesiedelt worden. Offen bleibt die Frage, in welchem chronologischen und topographischen Verhältnis die Siedlung zu der benachbarten Siedlung südlich der Krähenmauer (siehe unten, Nr. 14) stand.

12. Taltempel des Mykerinos (Abb. 4): Die Besiedlung des Taltempels vollzog sich in drei Etappen[58]. Die Häuser der ersten Phase stehen auf dem Steinboden des Tempels[59]. Auf dem Schutt des er-

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[50] W.M.F. Petrie, *Illahun, Kahun and Gurob*, London 1891, S. 51–52.

[51] *Abydos* I, S. 10–12, pls. 16–26; Ayn Asil (Siedlung, Gräber, Oberflächenfunde): C. Roubet, in: *BIFAO* 81, 1981, S. 204–205; dies., in: *BIFAO* 82, 1982, S. 325–331; B. Midant-Reynes, in: *BIFAO* 83, 1983, S. 257–262.

[52] T. Hikade, in: *MDAIK* 58, 2002, S. 305–322; vgl. aber immerhin zwei Messer als Teil des Hortfundes der 4. Dynastie, M. Bommas, in: *MDAIK* 53, 1997, S. 141 und Taf. 18b. In der Primärproduktion lassen sich Messer grundsätzlich nicht nachweisen. Mein herzlicher Dank gilt Frau B. Katthagen, die mir ein Exemplar ihrer unpublizierten Magisterarbeit *Die Silexartefakte aus Elephantine. Ein Beitrag zur Steinindustrie des Alten Reiches*, Tübingen 1985, zugesandt hat. In ihrem Material der 1.–6. Dynastie treten Steinmesser im Siedlungsgebiet mit 6,3% der Werkzeuge (17 von 272 Werkzeugen) ebenfalls nur schwach hervor.

[53] Buto: K. Schmidt, in: *MDAIK* 42, 1986, S. 201–208; J. Thomalsky, in: *MDAIK* 56, 2000, S. 136–142; Maadi: Rizkana/Seeher, *Maadi* II (Spinnwirtel: S. 52–53, pls. 94–96).

[54] Kromer, *Siedlungsfunde*, Taf. 33, 1; 30; 31; 32, 17; 26; 37, 1–3 (in oben angegebener Reihenfolge). Das Phänomen 'Wohnen' *vs.* 'Nur Arbeiten' ließe sich durch die Opposition 'Siedlung mit Lebensmittelpunkt' *vs.* 'Siedlung ohne Lebensmittelpunkt' ausdrücken.

[55] M. Bietak, in: K. Weeks (Hg.), *Egyptology and the Social Sciences*, Kairo 1979, S. 114.

[56] R. Stadelmann, in: *RdE* 33, 1981, S. 72; zur Lage des Taltempels, vgl. Z. Hawass, in: D. O'Connor/D.P. Silverman (Hg.), *Ancient Egyptian Kingship, PÄ* 9, Leiden – New York – Köln 1995, S. 224–225; ders., in: C. Berger/B. Mathieu (Hg.), *Études sur l'Ancien Empire et la nécropole de Saqqâra dédiées à Jean-Philippe Lauer, Orientalia Monspeliensia* 9, Montpellier 1997, S. 248–251 (freundl. Hinweis M. Haase); ders., in: Bietak, *Haus und Palast*, S. 56–59.

[57] W. Helck, in: *MDAIK* 15, 1957, S. 107.

[58] Reisner, *Mycerinus*, S. 51–53, pl. 8. Die Zuordnung der einzelnen Schichten war Reisner in einigen Fällen nicht möglich. Die Darstellung auf pl. 8 verunklart die Situation zusätzlich, da Mauern, die im Text als zu einer Schicht gehörig bezeichnet werden, auf dem Plan unterschiedlich schraffiert werden.

[59] Bei den Mauerzügen im Süden (Raum I-302 sub) handelt es sich möglicherweise um das *pr-šnʿ* des Tempels, vgl. Faltings, *Lebensmittelproduktion*, S. 57–59.

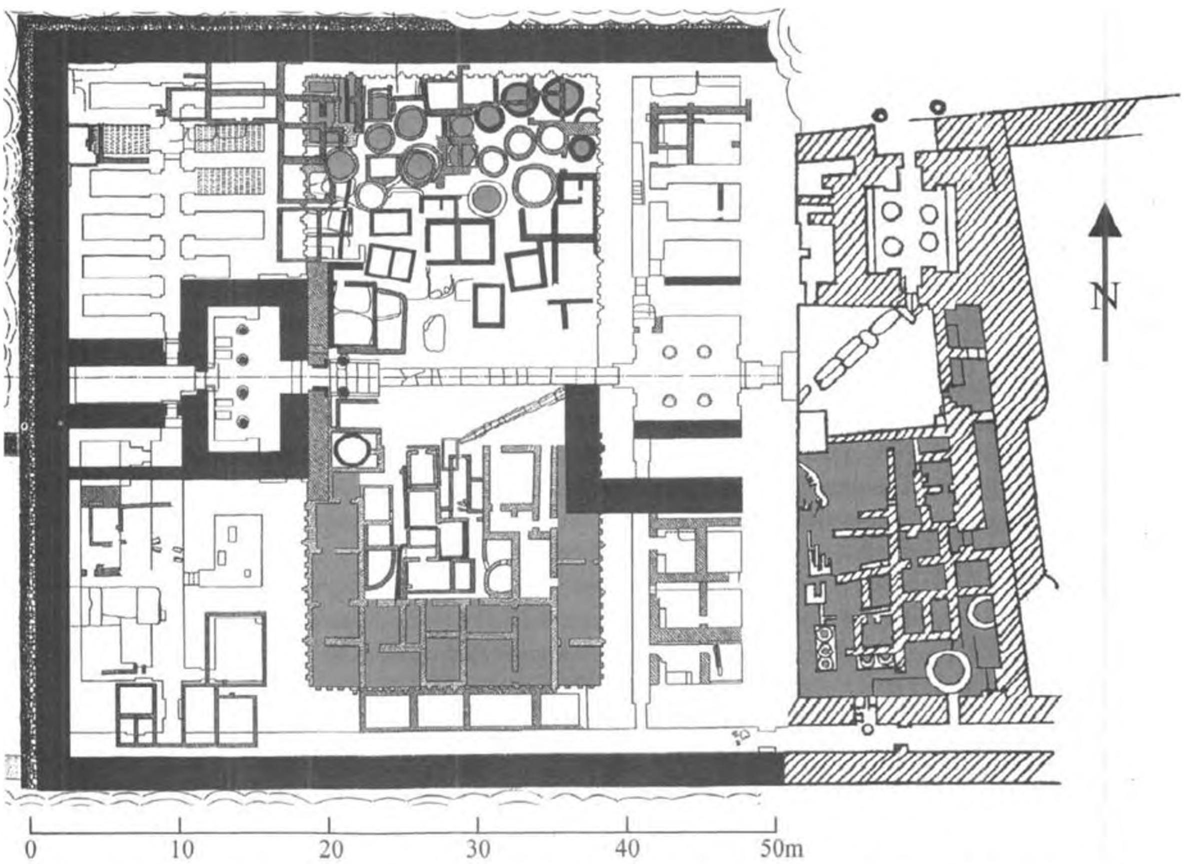

Abb. 4: Siedlung im und vor dem Taltempel des Mykerinos. Die Gebäude, die nach **Reisner**, *Mycerinus*, S. 49–53 zu der zweiten Phase der Besiedlung gehören, sind grau unterlegt (nach **Reisner**, *Mycerinus*, pl. 8 und **Hassan**, *Gîza IV*, fig. 1)

sten Tempels wurden die Häuser der zweiten Phase auf einer Fläche von 850 m² im Tempel und 200 m² vor dem Tempel gebaut. Die Häuser der dritten Phase gehen über ihre Mauern und den ersten Tempel hinweg, haben teils aber mit den Häusern der zweiten Phase koexistiert.

Mit Ausnahme der Räume 57a-57b-58 lehnen sich die Häuser der zweiten Phase im Südteil des Hofes U-förmig an die Mauern des ersten Tempels an. Zwei der fünf 15 m² bis 40 m² großen Wohneinheiten sind Dreiraumhäuser[60]. Auf der Nordseite des Hofes liegen zwölf runde Getreidesilos, sieben weitere auf der Fläche vor dem Tempel. Ähnlich wie in der Siedlung im Taltempel der Knickpyramide haben die Bewohner nicht pro Wohneinheit gewirtschaftet, sondern waren kollektiv von den Speichern abhängig. Die Strukturierung der Siedlung in Wohnbereich und Speicherbereich wird in der dritten Phase beibehalten. Von den acht Gebäuden dieser Bebauungsschicht ist die Binnengliederung aber nur noch bei dem Dreiraumhaus 22-27-28 zu erkennen. Ob die bei **Reisner** dunkel schraffierten Mauern der zweiten oder dritten Phase zuzuordnen sind, konnten die Ausgräber nicht entscheiden.

Die Mauerzüge der Siedlung setzen sich im Osten unterhalb des islamischen Friedhofs fort[61]. Nun entsprechen die Knickrandschalen des Taltempels mit ihrem scharfkantigen Knick unter der

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[60] **von Pilgrim**, *Elephantine XVIII*, Abb. 82a.

[61] **Hassan**, *Gîza IV*, fig. 1.

Mündung den Formen der 5. und 6. Dynastie, während Formen der 4. Dynastie kaum vertreten sind[62]. Die Brotmodel haben alle einen ebenen Boden wie die Formen des späteren Alten Reiches[63]. Demzufolge hatte die Besiedlung im Tempel ihren zeitlichen Schwerpunkt erst mehrere Generationen nach dessen Errichtung. Aus der Spätdatierung der Siedlung folgt, daß sie nicht aus dem Tempel hinaus-, sondern von Osten her in ihn hineingewachsen ist.

Die Vergesellschaftung von Kult- und Profankeramik spiegelt die Verquickung von Kult und Wohnen wider. Mit einem Drittel am Gesamtinventar sind Brotmodel am stärksten vertreten, Biertöpfe machen nur 11,73% aus[64]. Überraschend ist die geringe Anzahl an Knickrandschalen und einfachen Schüsseln zum Nahrungsverzehr (zusammen 6,63%). Das Profil des keramischen Inventars verleiht der Siedlung weniger den Charakter eines Aufenthalts- und Wohnortes als den einer Verarbeitungsstätte des Getreides, das in den benachbarten Silos lagerte. Die Steingefäße und Flintgeräte[65] stammen aus den Tempelmagazinen und gehören nicht zum Siedlungsinventar. Die wenigen Siegelabdrücke[66] legen ebenso wie die geringe Zahl an Biertöpfen die Vermutung nahe, daß in dem ausgegrabenen Teil der Siedlung keine zentrale Verwaltungsstation lag.

13. Siedlung vor dem Grab der Chentkaus in Giza (Abb. 5): Mit 6000 m^2 Fläche ist diese L-förmige Plansiedlung wesentlich größer als die bisher behandelten Siedlungen[67]. Die vier großen Häuser im Südosten sind 320 m^2 groß, die zehn kleinen rund 160 m^2. Alle haben einen durch Pilaster gekennzeichneten Repräsentationsraum[68]. In Größe und Morphologie unterscheiden sich die Häuser damit erheblich von den nicht geplanten Häusern der anderen Siedlungen. Der Entwurf der Siedlung sieht eine Belegung durch zwei Personengruppen vor, doch läßt sich eine Zuweisung der kleinen Häuser an die *ḥm.w-nṯr* und der großen an die *ḫntj.w-š* durch die bekannten Titel nicht belegen[69].

Zwischen den kleinen Häusern und dem Grab liegt ein Verwaltungstrakt, zu dem sechs annähernd quadratische Räume gehören. Die Seitenlänge ihrer Innenwände schwankt zwischen 2,40 m und 3,00 m. Ähnliche Räume deutet B. KEMP bei den Modellspeichern des Meketre, in Kahun und in den nubischen Grenzfestungen als Getreidespeicher[70]. Bei einer durchschnittlichen Seitenlänge von 2,70 m ergibt sich in Analogie eine Füllhöhe von 1,90 m[71]. Die Magazine fassen demnach 83 m^3. Auf

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[62] Lediglich REISNER, *Mycerinus*, Fig. 74, Typ XXXIII,5 mit tiefsitzender scharfkantiger Schulter hat keine Entsprechung in den Typen des vorangeschrittenen Alten Reiches.

[63] FALTINGS, *Lebensmittelproduktion*, S. 135.

[64] REISNER, *Mycerinus*, S. 205–208. Seiner Statistik liegen 452 als zu einem Typ gehörige Gefäße zugrunde. Die nicht identifizierten Scherben würden laut REISNER die Zahl der Gefäße maximal verdoppeln.

[65] Unter den Flintgeräten dominieren Klingen, vgl. N. CONARD, in: *MDAIK* 56, 2000, S. 39.

[66] KAPLONY, *Rollsiegel* II, s.v. *Rꜥ-ḫꜥ-f* 12, *Ḏd-kꜣ-Rꜥ* 8 und 9, *Mrjj-Rꜥ* 22, K.U. 3–10.

[67] HASSAN, *Gîza IV*, 35–50, fig. 1 (Der Maßstab ist in 1:600 zu korrigieren). Aus dem Plan geht hervor, daß die Plansiedlung architektonisch zum Grab der Chentkaus gehört, der Anbau vor dem Taltempel der Mykerinospyramide aber gegen die Auffassung HASSANS nicht der Taltempel der Chentkaus ist. Dem Anbau fehlen Kulträume, und von dem sekundären Eingang mit vier Säulen führt ein Bodenpflaster auf den ehemaligen Eingang des Taltempels des Mykerinos.

[68] F. ARNOLD, in: *MDAIK* 54, 1998, S. 12–16.

[69] Der Vorschlag stammt von F. ARNOLD, in: *MDAIK* 54, 1998, S. 4. D. JONES, *An Index of Ancient Egyptian Titles, Epithets and Phrases of the Old Kingdom I–II, British Archaeological Reports, International Series* 866, 1–2, Oxford 2000 verzeichnet aber keine Titel, die die Existenz von *ḫntj.w-š* für Chentkaus, eine Königin oder eine Königsmutter bezeugen (im folgenden zitiert als JONES, *Index*). Das bisher bekannte Priesterpersonal für Königinnen und Königsmütter umfaßt: *wꜥb*-Priester (JONES, *Index*, Nr. 1375, 3380), männliche und weibliche *ḥm(.t)-kꜣ*-Priester (Nr. 674?, 675, 676, 1068, 2172, 3750), männliche und weibliche *ḥm(.t)-nṯr*-Priester (Nr. 1774, 1934, 1935, 2010, 3445, 3446) und *ḏt*-Personal (Nr. 1774, 3750).

[70] B. KEMP, in: *ZÄS* 113, 1986, S. 120–136. Die im folgenden durchgeführten Rechnungen beruhen auf KEMPS Voranahmen.

[71] KEMP setzt zur Rekonstruktion der Füllhöhe in Kahun einen Quotienten (Höhe : Seitenlänge) von 0,7 an. Er fußt auf der Höhe der Speicher in Mirgissa und Uronarti.

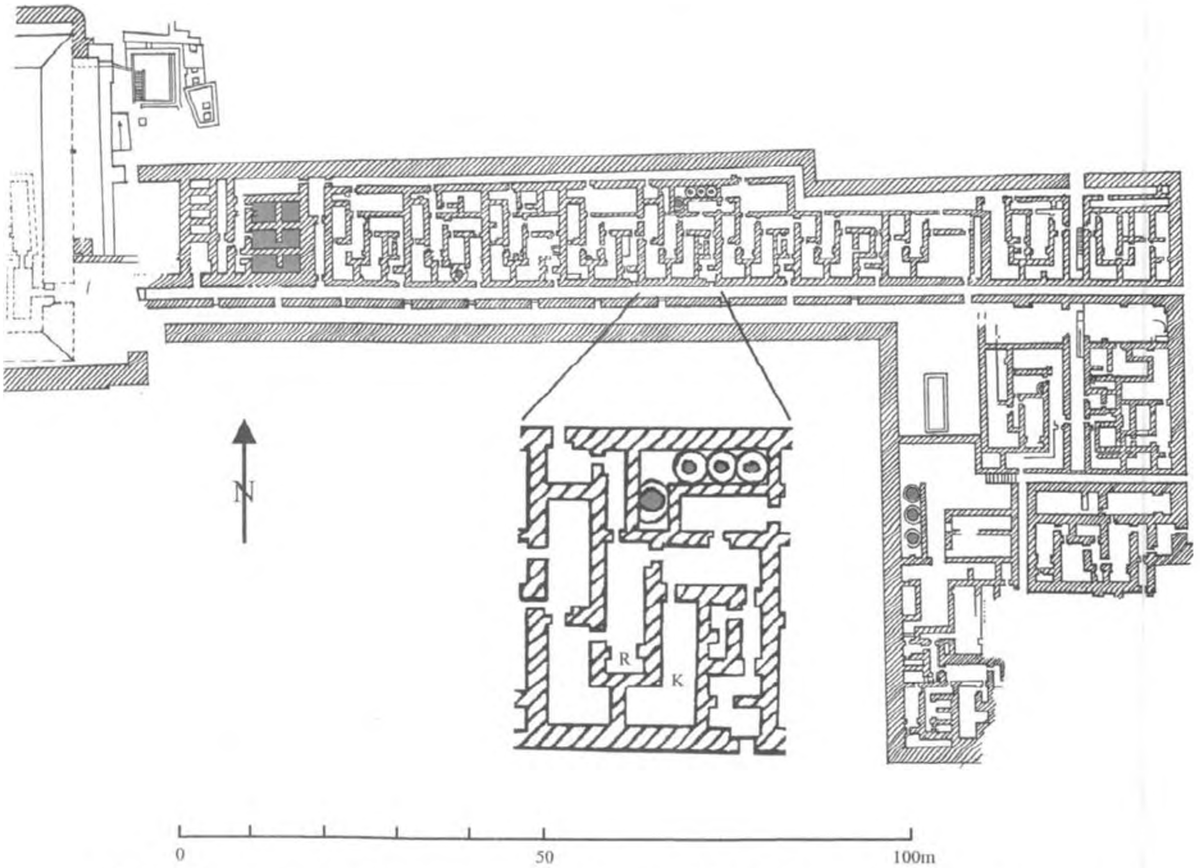

Abb. 5: Siedlung vor dem Grab der Chentkaus in Giza. Die quadratischen Speicher und runden Silos sind grau unterlegt. R = Repräsentationsraum, K = Kochstelle (nach Hassan, *Gîza IV*, fig. 1)

der Grundlage eines jährlichen Bedarfs pro Person von 0,3 bis 0,5 m^3 versorgen sie 166 bis 277 Personen. Der Bevölkerungsquotient (Fläche : Einwohner) liegt mit 36,1 respektive 21,6 fast doppelt so hoch wie in Kahun. Kahun ist etwa 350 m x 300 m groß gewesen. Nach Kemps Berechnungen haben auf diesen 105 000 m^2 rund 5000 bis 9000 Personen gewohnt. Der Bevölkerungsquotient liegt folglich zwischen 21,0 und 11,6. Während sich diese Zahlen nur in den Extremen berühren, entsprechen sich die Quotienten Einwohner : Haushalt. Kahun zählt auf Petries Plan 300 Häuser, weitere 200 sind im nicht ausgegrabenen Teil zu vermuten. Auf jeden Haushalt kommen damit 18 bzw. 10 Personen. Ergänzt man die Chentkaus-Siedlung zu einem kompletten L, stehen 15 Wohneinheiten auf 6000 m^2 (Quotient: 18,4 bzw. 11,0). Allerdings ist die Ausdehnung der Siedlung nach Osten unterhalb des islamischen Friedhofs nicht bekannt.

Die Bewohner der Chentkaus-Siedlung hatten nach diesen Zahlen durchschnittlich doppelt soviel Platz wie die Bewohner von Kahun, aber die Planer der Siedlungen sind von einer ähnlich hohen (!) Zahl von Mitgliedern pro Haushalt ausgegangen. Nach wie vor ist die Ermittlung von Einwohnerzahlen einer Siedlung an Hand ihres Grundrisses problematisch. Da die Zahlen für beide Siedlungen aber nicht völlig divergieren, erhalten Kemps Berechnungen eine gewisse Bestätigung. Gleichzeitig geht daraus hervor, daß die Planer der Chentkaus-Siedlung eine vollständige, kollektive Versorgung der Bewohner aus den quadratischen Speichern vorgesehen haben.

Dennoch haben die Bewohner in mehreren Fällen Getreidesilos in ihren Häusern eingerichtet. Aus dem Siedlungsschutt barg S. Hassan mehrere Mahlsteine[72], und die Kochstellen mit Ascheschichten in den Häusern zeugen von der Lebensmittelherstellung vor Ort. Die Dokumentation der Funde ist für eine weitere Auswertung zu spärlich. Daher ist es nicht möglich, die Laufzeit der Siedlung nach dem Tod von Chentkaus I.[73] zu bestimmen.

14. Siedlung südlich der Krähenmauer (Abb. 6): Seit 1988 graben Archäologen unter der Leitung von M. Lehner eine weitläufige Fläche südlich der Krähenmauer (Heit el-Gurob) aus[74]. Im Norden markiert die Krähenmauer den Abschluß der Siedlung, im Westen und Süden dagegen eine Umfassungsmauer. Im Osten läßt sich die *main street* noch 31 m weit jenseits des Siedlungskerns verfolgen. Von West nach Ost mißt die Siedlung damit maximal ca. 160 m, von Norden nach Süden 185 m. Die Siedlungsgröße beläuft sich nach diesen Zahlen auf 29 600 m².

Der Kern der Siedlung besteht aus schmalen Lehmziegelgalerien (ca. 35 m x 5 m), die in vier Reihen mit je etwa neun Galerien angeordnet sind. Ihr Innenraum zerfällt in zwei Teile. Der eine war mit Hilfe von Säulen überdacht, der andere diente als Produktionsstätte. Produziert wurde in erster Linie Brot, in einem Fall weisen Schlackereste und ein Schmelztiegel in Form eines versinterten Brotmodels auf Kupferverarbeitung hin. Die *hypostyle hall* setzt sich architektonisch und funktional von den Galerien ab. Sie wird von drei Bänken mit eingelassenen Säulenbasen durchzogen. Die vielen Fischgräten, Flintklingen, Schaber und Ascheschichten rühren von der Fischverarbeitung und -konservierung her.

Die Architektur der Galerien entspricht nicht der gewachsener Häuser oder geplanter Wohnhausarchitektur (siehe oben, Nr. 13). Eine Bewohnung der überdachten Teile läßt sich bislang nicht nachweisen. Es fehlen runde Getreidesilos, die ein Indikator für eine dauerhafte Besiedlung wären. Zwischen den Galerieblöcken und der Umfassungsmauer liegen Hofhäuser und Magazingebäude aus Bruchstein. Zwei Kinderbestattungen in diesem Siedlungsbereich legen nahe, daß dort Familien wohnten.

Die Funde der Grabung sind bislang kaum publiziert[75]. Auf einem Siegelabdruck aus dem Schnitt A1-6 ist die *wꜥb.t* des Mykerinos erwähnt[76]. Damit ist immerhin ein Zusammenhang mit den logistischen Strukturen der Mykerinospyramide gegeben. Allerdings ist die genaue Anbindung der Fläche A1-6 an die Siedlung noch unklar. Bis *dato* ist die Siedlung als eine Versorgungsstation für den Unterhalt beim Bau und Betrieb der Mykerinospyramide zu deuten. Über die Laufzeit der Siedlung wird die Untersuchung der Funde Auskunft geben.

15. Die *workmen's barracks* hinter der Chefrenpyramide: Die *workmen's barracks*, die beim Bau der Chefrenpyramide angelegt wurden, sind schmale Galerien aus Bruchstein, in ihren Ausmaßen etwas kleiner als die Galerien der Anlage südlich der Krähenmauer[77]. Mit mindestens 91 Galerien und

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[72] Hassan, *Gîza IV*, 36 (Nr. 2), 44 (Nr. 36), 42 (Nr. 3 = pl. 16A).

[73] Zum Verhältnis von Chentkaus I. und Mykerinos vgl. M. Verner, in: *DE* 38, 1997, S. 113–114.

[74] http://www-oi.uchicago.edu/OI/AR/00-01/00-01_Giza.html. Am Ende des Berichts verweist der Link „RETURN TO GIZA PLATEAU MAPPING PROJECT“ auf die Vorberichte der Jahre 1991–92, 1993–94, 1995–96, 1998–99 und 1999–2000. Der Bericht 2001–2002 erschien erst nach Drucklegung des Artikels. Er bestätigt im wesentlichen die analyserelevanten Ergebnisse, wenngleich eine temporäre Schlafnutzung der Galerie III-4 nachgewiesen wurde und die Freilegung der südlich und östlich angrenzenden Strukturen detailliertere Einblicke in die Stratigraphie und Organisation der Siedlung gewähren.

[75] Feuersteingeräte der Grabungsfläche A1-6, vgl. N. Conard, in: *MDAIK* 56, 2000, S. 21–41.

[76] M. Lehner, http://www-oi.uchicago.edu/OI/PROJ/GIZ/NN_Fall92/NN_Fall92.html, "Area A". Vermutlich entspricht A1-6 den Gebäudestrukturen, die im Südwesten auf dem Plan http://www-oi.uchicago.edu/OI/AR/00-01/00-01_Giza.html, fig. 1 liegen.

[77] U. Hölscher, *Das Grabdenkmal des Königs Chephren, Sieglin Exp.* 1, Leipzig 1912, Blatt II.

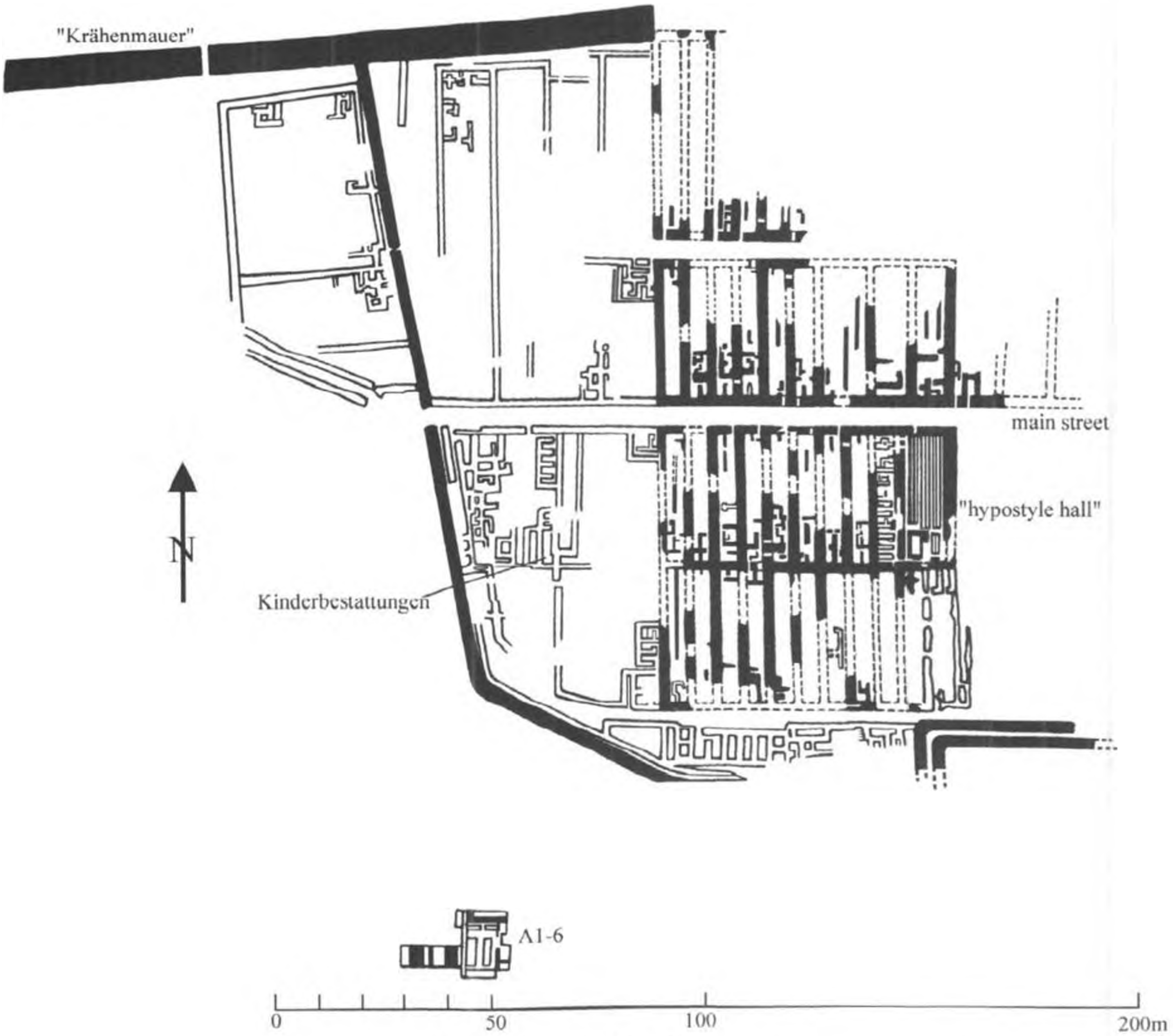

Abb. 6: Siedlung südlich der Krähenmauer
(nach M. Lehner, http://www-oi.uchicago.edu/OI/AR/00-01/00-01_Giza.html, fig. 1)

einer Fläche von 450 m x 80 m (36 000 m^2) übertrifft sie jene aber sogar an Größe. Die Nachuntersuchungen von M. Lehner haben Bruchteile der Fläche erfaßt[78]. Der rückwärtige Teil der Galerien war jeweils fundleer, während in den Eingängen Flintwerkzeuge lagen, überwiegend einfache Abschläge (171 Stück, 72,8%)[79]. Diese einseitige Verteilung der Werkzeugtypen unterscheidet die *workmen's barracks* wesentlich von der Kromer-Siedlung (Nr. 11), deren Werkzeuge aus einer bewohnten Siedlung stammen. Genau wie das Fehlen von Knochen spricht dieser Befund gegen Petries Annahme, daß hier die Arbeiter für den Pyramidenbau gewohnt haben. Brocken und Königsstatuetten aus verschiedenen Hartgesteinen legen eine Deutung als Werkstatt nahe, wenn auch die hinteren Teile der Galerien als

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[78] M. Lehner/N.J. Conard, in: *JARCE* 38, 2001, S. 21–60.

[79] N. Conard, in: *MDAIK* 56, 2000, S. 21–41.

Magazine genutzt worden sein mögen. Im Keramikinventar machen Brotmodel, Biertöpfe und dickwandige Knickrandschalen zu etwa gleichen Teilen zwei Drittel der 552 diagnostischen Scherben aus. Sie zeugen von der Produktion und dem Verzehr von Lebensmitteln vor Ort. Die Form der Knickrandschalen könnte detaillierten Aufschluß über die Laufzeit der Anlage geben.

16. Der Pyramidentempel des Djedefre: Der 900 m² große Hof wird auf allen vier Seiten von sekundär eingebauten Räumen gesäumt[80]. Sie sind zum Teil extrem klein (2,5 m²) und lassen sich nicht zu Häusern rekonstruieren. Auf dem Pyramidenhof zwischen Tempel und Pyramide steht ein mindestens 170 m² großes Gebäude, dessen Größe und Form mit mehrfach geknickter Durchgangsachse dem Planbau H8 der Werkstätten in Giza-Süd (siehe oben, Nr. 10) ähnelt. Hinweise auf eigene Getreidespeicher liegen nicht vor. Die Lage der Bauten spricht für eine Interpretation als Priesterwohnungen. Funde, die weiteren Aufschluß über die Funktion der Räume geben könnten, sind nicht bekannt[81].

Vergleich der Siedlungen nach Siedlungstypen

Tabelle 1 stellt die Informationen zu den einzelnen Fundorten im Hinblick auf die oben erläuterten Kriterien und nach Siedlungstypen angeordnet zusammen. Die Typologie basiert auf der Funktion der Siedlungen. Werkstätten, Baustellen- und Arbeitersiedlungen stehen im Dienst des Pyramidenbaus. Ihnen liegt eine je eigene Organisation von Wohnen und Arbeiten zugrunde. Eine relativ homogene Gruppe bilden die Priestersiedlungen, auch wenn sie sich organisatorisch voneinander unterscheiden. Die Eigenheiten der Mykerinos- und der Chentkaussiedlung treten dabei hervor. Das archäologische Material zu den Pyramidenstädten ist mager, daher ist diesem Siedlungstyp eine anschließende Betrachtung gewidmet.

Die Baustelle in Giza-Süd (Nr. 10) und das Arbeitshaus von Dahschur (Nr. 4a) sind Werkstätten, in denen sich Steinbearbeitung und Keramikproduktion nachweisen lassen. Sie liegen auf ausgedehnter Fläche im freien Gelände und sind zumindest im Fall von Dahschur nur kurzfristig in Betrieb. Eine Bewohnung ist nicht vorgesehen. Die Arbeiter werden von außerhalb mit fertigen Rationen versorgt. Architektonisch fallen große Werkhöfe und Mauern, die in engem Abstand einen offenen Platz parzellieren, auf. Ähnliche Strukturen sind aus der metallverarbeitenden Anlage in Buhen[82] und aus Buto[83] bekannt. Als drittes Element treten in Giza (H12-H14) die Galerien mit einer Zweiteilung in einen überdachten Teil und einen Werkteil hervor. Sie bilden auch die charakteristische Form der *workmen's barracks* (Nr. 15), der Siedlung südlich der Krähenmauer (Nr. 14) und einer unpublizierten Anlage aus Bruchstein in Giza-Nord[84]. Die Interpretation der *workmen's barracks* als Werkstätte bleibt vorläufig, da sie

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[80] V. Maragioglio/C. Rinaldi, *L'architettura delle piramidi menfite V. Le Piramidi di Zedefrâ e di Chefren*, Rapallo 1966, Tav. 4, eine leicht aktualisierte Skizze bei N. Grimal, in: *BIFAO* 97, 1997, S. 319, fig. 1. Die Räume zu beiden Seiten des Korridors vor dem Hof scheinen Magazine zu sein.

[81] E. Chassinat, in: *MonPiot* 25, 1921–1922, S. 53–75 führt einige figürliche Funde auf, die aus den Tempelmagazinen stammen dürften. Außerhalb des Tempels sind Modellopfergefäße, Biertöpfe und Brotmodel gefunden worden, vgl. S. Marchand/M. Baud, in: *BIFAO* 96, 1996, S. 255–288. Für die aktuellen Ausgrabungen vgl. die Überblicksberichte am Ende von *BIFAO* ab 1995.

[82] W.B. Emery, in: *Kush* 11, 1963, S. 116–120, fig. 3, Block XII.

[83] D. Faltings, in: *MDAIK* 52, 1996, S. 92–93, Abb. 2. Der Zusammenhang mit einer industriellen Anlage ist hier aber nicht evident. Das Erdreich um die Mäuerchen herum ist mit inkohlten Getreidekörnern durchsetzt.

[84] Nach M. Lehner, in: *MDAIK* 41, 1985, S. 121, Nr. B9 (Fig. 3B) liegt sie nördlich der Straße zwischen Cheopspyramide und Sphinx, südlich der Straße G7000 des Ostfriedhofs von Giza. Die Galerien sind 10 m – 21 m lang und liegen parallel in einem Abstand von 5,40 m – 5,70 m nebeneinander.

	Raum-zeitliche Verankerung		Grundrißgestaltung			Funktion		Organisation				Bewohner
	Lage	Datierung	Größe	Struktur	Gebäudemorphologie	Kult	Handwerk	Speicher	Brotherstellung	Verzehr	Lagerung	
Werkstätten												
'Arbeitshaus' Dahschur (4a)	Im Pyr.-vorfeld	Snofru	1000 m^2	Einzelner Hof	Werkhof, schmale Parzellen	Nein	Keramikproduktion, Steinbearb.; keine Messer, Schaber, Klingen	Nein	Nein	Viel	Wenig	Unbewohnt
Werkstätte Giza-Süd (10)	Im Pyr.-vorfeld	Chefren oder Mykerinos	24 000 m^2	Vereinzelte Gebäude, keine dichte Bebauung	2 Werkhöfe, Galerien, schmale Parzellen, 1 Planbau, Wohnhäuser	–	Steinbearbeitung, Keramikproduktion?	Nein	–	–	–	Unbewohnt
Chefren (15)	Hinter Pyramide	Chefren – ?	36 000 m^2	Geplant, dichte Bebauung, Umf.mauer	Mind. 91 Galerien	Nein	Steinbearbeitung, viele Abschläge	Nein	Ja	Ja	Ja	Unbewohnt
Baustellensiedlung												
'Arb.siedlung' Dahschur (4b)	Neben Pyramide	Snofru	200 m^2?	Einzelne Baracken, keine Umf.mauer	2 Baracken; je 4 Räume à 25 m^2	Nein	Steinbearbeitung	Nein	Nein	Viel	Wenig	–
Arbeitersiedlungen												
Lehner-Siedlung (14)	Im Pyr.-vorfeld	Mykerinos – ?	Ca. 29 600 m^2	Geplant, dichte Bebauung, Umf.mauer	Ca. 36 Galerien; Hofhäuser/Magazinbauten	–	Bäckereien Kupferverarbeitung, Fischverarbeitung	Nein	Ja	–	–	Familien in Bruchsteingebäuden
Kromer-Siedlung (11)	–	Cheops – Chefren	–	–	–	Nein	Viele Messer, Klingen, Schaber, Spinnwirtel	–	Ja	Ja	Ja	Familien
Priestersiedlungen												
Knickpyr. (2)	Im Tempelbezirk	Ende 4. – 6. Dyn.	760 m^2	Gewachsen, dichte Bebauung	Ca. 20 Wohnhäuser zwischen 14–60 m^2	Ja	Klingen, Messer, Schaber, Beile	6 runde Silos, kollektiv	Ja	Ja	Ja	–
Udjebten (5)	Im Pyr.-bezirk	Nach Udjebten	Auf 1200 m^2	Gewachsen, vereinzelte Häuser	Mind. 6 Wohnhäuser zwischen 14–50 m^2	–	–	Nein	–	–	–	–
Neferirkare (6)	Im Pyr.-bezirk	?– bis Ende 6. Dyn.	675 m^2	Gewachsen, dichte Bebauung	2 Wohnhäuser à 35 m^2, 8 (?) weitere Häuser	–	–	Nein	–	–	–	25–30 Personen
Neferefre (7)	Im Pyr.-bezirk	Nach Neferefre – 6. Dyn.	300 m^2	Gewachsen, dichte Bebauung	Kleine Räume, keine Häuser	Ja	–	Nein	Wenig	Viel	Wenig	–
Djedefre (16)	Im Tempelbezirk	Nach Djedefre	900 m^2	Gewachsen, dichte Bebauung	Kleine Räume, keine Häuser	–	–	Nein	–	–	–	–
Mykerinos (12)	Im Tempelbezirk	Späteres Altes Reich	1050 m^2	Gewachsen, dichte Bebauung	Mind. 5 Wohnhäuser zwischen 15–40 m^2	Ja	Viele Klingen	19 Silos, kollektiv	Viel	Wenig	Ja	–
Chentkaus, Giza (13)	Vor der Pyramide	Chentkaus I – ?	6000 m^2	Geplant, dichte Bebauung, Umf.mauer	Mind. 15 Wohnhäuser à 160 bzw. 320 m^2	–	–	6 Speicher, kollektiv; 9 Silos in Häusern	Ja	–	–	Familien, ca. 166–277 Personen
Pyramidenstädte												
Talt., Rote Pyr. (3)	Am Taltempel	Altes Reich, Mittleres Reich	Ca. 26 000 m^2	–	–	Ja	Steinbearbeitung	–	–	–	–	*rmṯ w, ḫntj.w-š*
Medum (1)	Am Taltempel	Snofru, Mittleres Reich	300 m x ? m	–	–	–	–	–	–	–	–	–

Tab. 1: Siedlungstypen bei den Pyramiden des Alten Reiches

sich durch ihre strenge Architektur, die unmittelbare Anbindung an die Chefrenpyramide und die eigene Lebensmittelherstellung von den anderen beiden Werkstätten unterscheidet. Andererseits deutet nichts auf ihre Bewohnung hin. Werkstätten sind damit im strengeren Wortsinn keine Siedlungen, wurden hier aber berücksichtigt, um dieses Kriterium im archäologischen Material zu etablieren.

Die sogenannte 'Arbeitersiedlung' von Dahschur (Nr. 4b) ist besser als eine 'Baustellensiedlung' zu bezeichnen. Baustellensiedlungen haben im Gegensatz zu Arbeitersiedlungen eine kurze Laufzeit und liegen unmittelbar neben ihrer Baustelle. Sie sind durch lose nebeneinander stehende Baracken gekennzeichnet, die wie bei der zeitgleichen Baustellensiedlung an der Talsperre im Wadi Gerrawi[85] der Unterbringung der Arbeiter dienten. Organisatorisch stehen sie wegen ihrer externen Versorgung mit fertigen Rationen Werkstätten näher als Arbeitersiedlungen.

Arbeitersiedlungen zeichnen sich in Anlehnung an Deir el-Medineh und Amarna durch eine zusammenhängende Wohnstruktur innerhalb einer Umfassungsmauer aus. In ihnen wohnen mit den Arbeitern auch ihre Familien, die dort längerfristig angesiedelt werden. Die Siedlung südlich der Krähenmauer (Nr. 14) hat zwar eine geschlossene Baustruktur mit Umfassungsmauer, aber Wohnnutzung ist nur für eines der Bruchsteingebäude nachgewiesen. Zukünftige Grabungen und Publikationen lassen auf eine angemessenere Bewertung der Siedlung hoffen. Die Architektur und bauliche Gliederung der KROMER-Siedlung (Nr. 11) ist nicht bekannt. Das Fehlen von Kultkeramik im Keramikinventar spricht gegen eine Deutung als Priestersiedlung. Lage und Datierung weisen auf einen Funktionszusammenhang mit den Pyramiden von Cheops und Chefren hin. Im Gegensatz zu Werkstätten ist die Art des Handwerks sehr vielfältig und nicht auf einzelne Handwerke reduziert. Der Siedlungsschutt rührt von Haushalten mit einer relativ ähnlichen Ausstattung an Werkzeugen her. Die eigenständige Lebensmittelproduktion und die Existenz von Frauen unterstreichen den stärkeren Wohncharakter der Siedlung. Als Arbeitersiedlung setzt sie sich organisatorisch und in der sozialen Formation der Bewohner von Werkstätten und Baustellensiedlungen ab.

Die Priestersiedlungen liegen innerhalb des Pyramiden- oder Taltempelbezirks. Zu ihnen gehören die Siedlung im Taltempel der Knickpyramide (Nr. 2), im Pyramidentempel des Neferirkare (Nr. 6), Neferefre (Nr. 7) und Djedefre (Nr. 16), sowie die Siedlung rund um die Udjebtenpyramide (Nr. 5). Der Raum im Pyramidentempel der Chentkauspyramide in Abusir (Nr. 8) ist keine Siedlung. Wegen seiner ungewöhnlichen Morphologie, die keine sichere Funktionsdeutung zuläßt, gehört auch das Gebäude am Sonnenheiligtum des Userkaf (Nr. 9) nicht hierzu. Die Priestersiedlungen nehmen eine Fläche von ca. 300 m^2 bis 1000 m^2 ein, abhängig vom zur Verfügung stehenden Platz. Die Häuser sind zwischen 14 m^2 und 60 m^2 groß und repräsentieren, sofern als Haustyp erkennbar, Wohnhausarchitektur. Die Anlage und der Umgang mit der Siedlung lagen in der Hand ihrer Bewohner. Sie haben die Häuser sekundär einige Zeit nach der Errichtung der Pyramidenanlage eingebaut. Die Priestersiedlungen erweisen sich damit als lokale Initiativen der Priester, die hier temporär während ihrer Dienstzeit gewohnt haben.

Die Priestersiedlungen der Pyramiden von Neferirkare, Neferefre, Djedefre und Udjebten haben dieselbe Versorgungsstruktur. Speicher und nahrungsverarbeitende Anlagen lagen außerhalb. Dagegen lagerte im Taltempel der Knickpyramide das Getreide für den Unterhalt der Bewohner und den Totenkult in eigenen Silos. Eine parallele Situation scheint in der Mykerinos-Siedlung vorzuliegen. Doch die beiden Siedlungen haben ein unterschiedliches Produktionsverhalten, das sich bereits bei der Keramikanalyse bemerkbar gemacht hat. Während im Taltempel der Knickpyramide sieben Silos eine Siedlung von 760 m^2 versorgen, kommen in Giza auf 1050 m^2 19 Silos. Das Versorgungssystem in Dahschur ist damit auf den Totenkult und die Siedlung selbst beschränkt. In Giza dagegen schließt das Versorgungspotential auch Konsumenten außerhalb der ausgegrabenen Fläche ein. Diese Beobachtung untermauert die Annahme, daß die Häuser im Taltempel des Mykerinos Teil einer Siedlung unterhalb des islamischen Friedhofs sind. Diese Siedlung, möglicherweise die Pyramidenstadt des Mykerinos, grenzt unmittelbar an die Chentkaus-Siedlung. Ihre organisatorischen Verflechtungen, in die die Siedlung im Taltempel eingebunden war, sind aber nicht mehr zu verfolgen.

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[85] G. DREYER/H. JARITZ, *Die Arbeiterunterkünfte am Sadd-el-Kafara*, in: G. GARBRECHT/H.-U. BERTRAM, *Der Sadd-el-Kafara. Die älteste Talsperre der Welt (2600 v. Chr.), Mitteilungen des Leichtweiss-Instituts für Wasserbau der Technischen Universität Braunschweig* 81, Braunschweig 1983, Anhang B.

Die Siedlung vor dem Grab der Chentkaus unterscheidet sich von den Priestersiedlungen. Sie ist geplant und mit mindestens 6000 m² wesentlich größer. Die beiden Planhaustypen unterscheiden sich in Form und Größe (160 m² und 320 m²) von den Häusern der anderen Priestersiedlungen. Der Größenunterschied zwischen den beiden Haustypen sah eine Belegung durch zwei Klassen von Bewohnern vor. Diese soziale oder funktionale Differenzierung ist den anderen Priestersiedlungen fremd. Eine kollektive Versorgung der Siedlung war geplant, doch haben die Bewohner durch den Einbau von runden Getreidespeichern diese Versorgungsstruktur unterlaufen. Anders als die Bewohner der Priestersiedlungen haben sie begonnen, pro Wohneinheit zu wirtschaften. In den Häusern haben folglich Familien gewohnt und sich dauerhaft in der Siedlung eingerichtet. Da die Siedlung direkt vor dem Grab der Chentkaus liegt, diente sie vermutlich der Unterbringung der Priester und ihrer Familien.

Der sicherste archäologische Nachweis für eine Pyramidenstadt des Alten Reiches sind die Bohrungsbefunde auf hochgerechnet 26 000 m² um den Taltempel der Roten Pyramide (Nr. 3). Die lange Mauer am Ende des Aufwegs in Medum (Nr. 1) ist ein sehr schwacher Hinweis auf eine Pyramidenstadt. Die Pyramidenstädte lassen sich tatsächlich als ein eigener Siedlungstyp etablieren und sind von den Arbeiter- und Priestersiedlungen zu unterscheiden.

Pyramidenstädte

Das Wissen um die Pyramidenstädte des Alten Reiches gründet sich im wesentlichen auf das Dahschurdekret von Pepi I. aus dem Taltempel der Roten Pyramide[86]. Zweifellos haben sie bei den Taltempeln der Pyramiden gelegen, so wie im Mittleren Reich Kahun am Taltempel Sesostris' II. und die Plansiedlung am Taltempel Sesostris' III. in Abydos[87]. Doch stößt die Suche nach Siedlungsresten bei den Taltempeln des Alten Reiches mit Ausnahme der Siedlungen rund um das Wadi der Mykerinospyramide (Nr. 11–15) auf eine Materiallücke. Die Bohrungen am Taltempel der Roten Pyramide, in Mitrahine und in Giza[88] bringen aber Siedlungsmaterial des Alten Reiches zutage, das von den Pyramidenstädten des Alten Reiches unter dem heutigen Fruchtland stammen dürfte.

Die Gesamtbevölkerung der beiden Pyramidenstädte von Dahschur und anderer Pyramidenstädte wird im Dahschurdekret mit *rmṯ.w* bezeichnet. Unter ihnen haben die *ḫntj.w-š* einen rechtlichen Sonderstatus. Die *ḫntj.w-š* sind immer wieder Gegenstand der Forschung gewesen[89]. Da der Titel einem historischen Wandel unterlag und erstmals am Ende der 4. oder Beginn der 5. Dynastie belegt ist, ist eine retrograde Projektion der Verhältnisse in den beiden Pyramidenstädten von Dahschur von der Zeit Pepis I. an den Anfang der 4. Dynastie nicht möglich. Wie die *ḫntj.w-š* sind auch die *ḥm.w-nṯr* Priester des königlichen Totenkultes und haben in den Pyramidenstädten gewohnt[90].

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[86] *Urk.* I, 209.6–213.17; L. BORCHARDT, in: *ZÄS* 42, 1905, S. 1–11; GOEDICKE, *Königl. Dokumente*, S. 55–77; R. STADELMANN, in: *RdE* 33, 1981, S. 67–77.

[87] J. WEGNER, in: *MDAIK* 57, 2001, S. 281–308.

[88] Mitrahine: D.G. JEFFREYS/J. MALEK, in: *JEA* 74, 1988, S. 19–23 und weitere Berichte von D.G. JEFFREYS in den folgenden Bänden von *JEA*; Giza: ZAHI HAWASS, in: BIETAK, *Haus und Palast*, S. 56–59.

[89] P. ANDRÁSSY, in: *ZÄS* 118, 1991, S. 1–10; DIES., in: R. GUNDLACH/M. ROCHHOLZ (Hg.), *Ägyptische Tempelstruktur, Funktion und Programm (Akten der Ägyptologischen Tempeltagungen in Gosen 1990 und Mainz 1992), HÄB* 37, Hildesheim 1994, S. 3–12; DIES., in: C.-B. ARNST/I. HAFEMANN/A. LOHWASSER (Hg.), *Begegnungen. Antike Kulturen im Niltal, FS Endesfelder, Priese, Reinicke und Wenig*, Leipzig 2001, S. 1–18; M. BAUD, in: *BIFAO* 96, 1996, S. 13–49; A.M. ROTH, in: S. SCHOSKE (Hg.), *Akten des Vierten Internationalen Ägyptologen-Kongresses München 1985, Band 4. Geschichte – Verwaltungs- und Wirtschaftsge-*

Einen Einblick in das soziale Profil der Bewohner der Pyramidenstadt *Ꜣḫ.t-Ḫwfw* gibt die Zeugenliste eines Vertrages, der auf einem Stein aus der Nähe des Taltempels des Chefren überliefert ist[91]. Der Vertrag wird vor der *ḏꜣḏꜣ.t nj.t Ꜣḫ.t-Ḫwfw* geschlossen. Als Zeugen treten der Nekropolenarbeiter *Mḥ-ꜥ*, der Totenpriester *Ỉyj.nj*, der Totenpriester *Sꜣb.nj* und der Totenpriester *Nj-ꜥnḫ-Ḥrw* auf. Der Verkäufer des zu verhandelnden Hauses selbst ist der Schreiber *Ṯntj*. Die in dem Vertrag genannten Personen sind Priester, ein Verwaltungsbeamter und ein Handwerker, allesamt von niedrigem Rang. Ein ähnliches Bild entwirft die Zeugenliste im Grab des *Wpj-m-nfr.t*[92], doch ist der Bezug zu einer Pyramidenstadt nicht gegeben. Die Gräber von Pyramidenstadtbewohnern dieses sozialen Status liegen unterhalb des Fruchtlandes, aber zu einem Bruchteil lassen sie sich möglicherweise in Abusir archäologisch fassen[93]. Höherrangige Bewohner der Pyramidenstädte *Ḫꜥj-Snfrw rsj* und *Ḫꜥj-Snfrw mḥtj* liegen in den entsprechenden Nekropolen des späten Alten Reiches in Dahschur[94]. Daß die Elitefunktionäre des Alten Reiches in den Pyramidenstädten gewohnt haben, läßt sich nur vermuten.

Die Verwaltung der Pyramidenstädte lag in der Hand eines *ỉmj-rꜣ nw.t*, mit Ausnahme der Pyramidenstädte des Cheops und Chefren, die lange Zeit von einem *ꜥḏ-mr grg.t* (*mḥtj.t*) und einem *ꜥḏ-mr ṯnjw* (*rsj*) geleitet wurden[95]. Darin gleichen sie 'Bürgermeistern' der Provinzstädte und Oasen[96]. Von den übrigen Beamten der Stadt ist nur noch der Titel *zš-nw.t* bekannt[97]. Als juristische Instanzen fungieren in der Pyramidenstadt *Ꜣḫ.t-Ḫwfw* eine *ḏꜣḏꜣ.t* und in den beiden Pyramidenstädten von Dahschur eine *s.t-ḫt*-Behörde. Diese Institutionen sind Ausdruck einer funktionalen Differenzierung der Stadtverwaltung. Administrativ unabhängig davon ist die Verwaltung der Priester an einer Pyramide, auch wenn die Verquickung von Ämtern an der Pyramide und in einer Pyramidenstadt durch Personalunion natürlich eng ist[98].

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schichte – Rechtsgeschichte – Nachbarkulturen, *SAK Beihefte* 4, Hamburg 1991, S. 177–186; Dies., *A Cemetery of Palace Attendants including G 2084–2099, G 2230 + 2231, and G 2240*, *Giza Mastabas* 6, Boston 1995, S. 39–47; R. Stadelmann, in: *BIFAO* 81 (Suppl.), 1981, S. 153–164.

[90] *Wnj* ist *sḥḏ ḥm.w-nṯr nj nw.t=f* (*Urk.* I, 98.16). *Nw.t=f* bezeichnet die Pyramidenstadt Pepis I. Dieser Beleg ist daher etwa zeitgleich mit dem Dahschurdekret.

[91] *Urk.* I, 157.7–158.15; vgl. H. Sottas, *Étude critique sur un acte de vente immobilière du temps des pyramides*, Paris 1913. Weitere Bearbeitungen sind aufgeführt bei H. Goedicke, *Die privaten Rechtsinschriften aus dem Alten Reich*, *WZKM Beihefte* 5, Wien 1970, S. 149.

[92] Hassan, *Gîza* II, S. 190–191, fig. 219.

[93] Ricke, *Userkaf-SH* I, S. 34–35.

[94] N. Alexanian/S.J. Seidlmayer, in: *MDAIK* 58, 2002, S. 19–20 und Abb. 13.

[95] Zur Verwaltung der Pyramidenstädte, vgl. W. Helck, in: *MDAIK* 15, 1957, S. 91–111.

[96] Der Titel *ỉmj-rꜣ*+Stadtname/Oasenname ist belegt für: *ꜣbw* (Jones, *Index*, Nr. 257), *Wnw* (Nr. 417), *wḥꜣ.t* (Nr. 420), *Bḥd.t* (Nr. 454), *Ḳjs* (Nr. 934) und *Tꜣ-ỉḥw* (Nr. 981). Sebennytos (*Ṯb-nṯr.t*) ist von einem *ꜥḏ-mr* geleitet worden (Nr. 1345), und für *Dp* sind beide Titel belegt (Nr. 1000 und 1348). Die Städte *Nḫn*, *Nḫb*, *P* und *Dp* binden des weiteren eine ganze Reihe eigener Titel an sich, vermutlich weil sie in der Ideologie eine große Rolle spielen (Nr. 248, 1155, 1156, 1191, 1349, 1424, 1441(?), 1472, 1591, 1597, 1726, 1727, 1831, 1833, 1834, 1835, 2219, 2374, 2375, 2504, 2505, 2633, 2929, 2946, 2953–2957, 3709). Der Ort *Ḥw.t-ỉḥ.wt* wird sowohl mit dem Titel *ỉmj-rꜣ* als auch mit *ꜥḏ-mr* verbunden (Nr. 623 und 1327), daneben gibt es aber auch einen *ḥḳꜣ ḥw.t Ḥw.t-ỉḥ.wt* und einen *ḥḳꜣ ḥw.t-ꜥꜣ.t Ḥw.t-ỉḥ.wt* (Nr. 2456 und 2471). *Ḥw.t-ỉḥ.wt* wird in dieser Hinsicht einerseits wie eine Provinzstadt, andererseits wie eine Domäne behandelt.

[97] Jones, *Index*, Nr. 3142.

[98] W. Helck, in: *MDAIK* 15, 1957, S. 95. Zur Priesterverwaltung vgl. A.M. Roth, *Egyptian Phyles in the Old Kingdom. The Evolution of a System of Social Organization*, *SAOC* 48, Chicago 1991.

Die hier referierten Beobachtungen dienen der Entwicklung eines Modells der Pyramidenstädte des Alten Reiches. Bisher beruhen die Vorstellungen über ihr Aussehen nur auf einem Teil des bekannten Materials, und die Kriterien, die dem jeweiligen Entwurf zugrunde liegen, werden nicht erläutert[99]. Methodisch bietet die Anlehnung an die einzige bekannte Pyramidenstadt Kahun einen guten Ausgangspunkt.

Auffällig ist die Analogie zwischen der Siedlung vor dem Grab der Chentkaus und Kahun. Beiden ist gemeinsam, daß sie geplante Siedlungen mit genormten Wohneinheiten innerhalb einer Umfassungsmauer sind. Sie liegen am Grab eines Königs bzw. einer Königin. Die Einwohner haben die vorgesehene Versorgungsstruktur durch den Einbau eigener Getreidesilos in ihren Häusern aufgebrochen. Nach diesem Modell sind die Pyramidenstädte Plansiedlungen, die im Zuge des Pyramidenbaus jeweils neu angelegt werden. Das gilt bereits für die erste Pyramidenstadt *Ḏd-Snfrw*. Das Interesse und die Fähigkeit der Residenz, die Struktur einer Gesellschaft zu entwerfen, wird schon zu diesem Zeitpunkt an Hand der Privatgräber in der Residenz greifbar. Ihre Normierung läßt sich von Giza über das Lepsius-Mastabafeld in Dahschur bis zum „Far Western Cemetery" in Medum zurückverfolgen[100].

Die ideologiegeschichtliche Relevanz von Plansiedlungen liegt aber weniger in der Tatsache, daß sie angelegt wurden, als in der Form der Anlage. In dieser Hinsicht differieren Kahun und die Chentkaus-Siedlung nicht nur in der Größe. Der Unterschied zwischen den größten Häusern in Kahun (37,5 m x 52,5 m = 1968,75 m^2) und den nächstgrößeren Häusern im Westteil der Stadt (10,5 m x 15 m = 157,5 m^2) ist erheblich größer als der zwischen den beiden Haustypen in Giza. Während in Kahun eine Versorgung aus den Kornspeichern der zehn extrem großen Wohneinheiten geplant war, liegen die geplanten Speicher der Chentkaus-Siedlung außerhalb aller Wohneinheiten. Der Grundriß von Kahun spiegelt damit ein Versorgungsmodell wider, das sein organisatorisches Vorbild in der patronalen Sozialstruktur der Ersten Zwischenzeit hat[101]. Solange diese Sozialstruktur im Alten Reich nicht greifbar ist, sollten der Rekonstruktion einer Pyramidenstadt des Alten Reiches die Versorgungsstruktur und die Größenverhältnisse der Häuser der Chentkaus-Siedlung zugrunde gelegt werden.

Die Planer von Kahun sind von einer relativ differenzierten Gesellschaft unterhalb der Elitefunktionäre der großen Häuser ausgegangen. Die nächstgrößeren Häuser waren 157,5 m^2 groß, es folgen verschiedene Hausgrößen, und die unterste Bevölkerungsschicht lebte in den 7,5 m x 7,5 m (56,25 m^2) großen Häusern. Zu dieser Schicht gehören die Arbeiter, die zum Steineziehen herangezogen werden. Eine entsprechende Liste von Arbeitern führt einen *ẖrp*, einen Schreiber und einen *ṯzw* auf (pKahun VI, 13 rto I, 3–5)[102]. In einer vergleichbaren Liste stehen neben zerstörten oder unübersetzbaren Titeln drei Siegler (*ẖtmw*), zwei Phylenvorsteher (*mtj-n-zꜣ.w*), ein gewöhnlicher Vorlesepriester (*ẖrj-ḥb ꜥšꜣ*) und ein Tempeltorhüter (*zꜣw-ꜥꜣ ḥw.t-nṯr*) (pKahun VI, 14 vso II, x+6.7.9.11.13.14.16)[103]. Personen dieses Ranges treten auch in Zeugenlisten auf, darunter ein „Säulenschreiber" (*zš ꜥꜣ*) (pKahun I, 1 rto, II, 2–4)[104]. Die berufliche Bandbreite und der soziale Status dieser Handwerker, Priester und Verwaltungsbeamten entspricht denen der Pyramidenstadtbewohner des Alten Reiches. Sie machen in Kahun die

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[99] Junker, *Gîza* 6, S. 19; R. Stadelmann, in: *RdE* 33, 1981, S. 70; siehe unten Anm. 106 und 107.

[100] Alexanian, *Dahschur* II, S. 17–19.

[101] B.J. Kemp, *Ancient Egypt. Anatomy of a civilization*, London 1989, S. 149–157; D. Franke, in: *ZÄS* 117, 1991, S. 120–121; A. Gnirs, in: *Lingua Aegyptia* 8, 2000, S. 125–155; S.J. Seidlmayer, in: J. Assmann/V. Davies (Hg.), *Problems and Priorities in Egyptian Archaeology, Studies in Egyptology*, London 1987, S. 211.

[102] F.L. Griffith, *Hieratic Papyri from Kahun and Gurob (principally of the Middle Kingdom)*, London 1898, S. 42, pl. 15 (Faksimile), 15–17 = pl. 15 (Foto), pKahun VI.13 ohne Zeilenzählung (im folgenden zitiert als Griffith, *Kahun and Gurob*).

[103] Griffith, *Kahun and Gurob*, S. 41, pl. 14 (Faksimile), 45.46.48.50.52.53.55 = pl. 14 (Foto), pKahun VI.14 rto(!), II, 6.7.9.11.13.14.16.

[104] Griffith, *Kahun and Gurob*, S. 32, pl. 13 (Faksimile), 2–4 = pl. 13 (Foto), pKahun I.1 (page 2) ohne Zeilenzählung.

Masse der Bevölkerung aus, die in den kleineren Häusern wohnt. Dieser Zusammenhang spricht neben den Bohrungsbefunden um den Taltempel der Roten Pyramide dafür, daß die Pyramidenstädte des Alten Reiches wesentlich größer als die Chentkaus-Siedlung waren. Diese ist auf Grund ihrer geringen Größe und eines fehlenden inschriftlichen Belegs selbst nicht als Pyramidenstadt zu bezeichnen, wenngleich sie ihnen archäologisch ähnelt.

Auf der Ebene der Archäologie und der Sozialstratigraphie kann Kahun Pate für das Modell einer Pyramidenstadt des Alten Reiches stehen. Dieser Ansatz birgt die Gefahr in sich, die Verhältnisse von Kahun einfältig auf die Pyramidenstädte des Alten Reiches zu übertragen und die Besonderheiten von Kahun oder einzelner Pyramidenstädte des Alten Reiches zu übersehen. Doch sind die Quellen des Alten Reiches ohnehin zu spärlich, um einzelne Pyramidenstädte zu rekonstruieren. Das problematische Verhältnis von Pyramidenstadt und königlicher Residenz muß mangels entsprechender Quellen in diesem Modell unberücksichtigt bleiben[105]. Die Modellbildung dient vor allem der Widerlegung von Auffassungen, nach denen die Pyramidenstädte aus den Arbeitersiedlungen für die Pyramiden entstanden[106] oder identisch mit den Priestersiedlungen[107] sind.

Als Plansiedlungen von einiger Größe und einer differenzierten Sozialstratigraphie unterscheiden sie sich von den Arbeitersiedlungen in der Bandbreite der Berufe der Bewohner. Von den Priestersiedlungen unterscheiden sie sich durch ihre Größe, ihre Geplantheit und durch die soziale Formation der Haushalte. In den Pyramidenstädten haben Familien gewohnt, die im Gegensatz zu den Bewohnern der Priestersiedlungen eigenverantwortlich mit ihren Häusern umgegangen sind. Das kommt nicht nur im Einbau eigener Getreidespeicher zum Ausdruck, sondern auch in der Hausverkaufsurkunde aus der Pyramidenstadt *ꜣḫ.t-Ḫwfw*.

Ägyptische Städte und Pyramidenstädte

M. Bietak bezeichnet die Pyramidenstädte ausdrücklich als Städte. Städte seien durch eine Umfassungsmauer, kompakte Siedlungsweise und eine gewisse Größe gekennzeichnet und seien ein Zentrum für Handel, Verwaltung, Rechtsprechung oder Verkehr mit einer Konzentration von Handwerk, Waren, Magazinen und in der Regel mit einem Heiligtum. Die Bewohner differierten nach Beruf und sozialem Status und seien nicht in der Landwirtschaft tätig[108].

Die Anwendung dieses Merkmalkatalogs auf die Pyramidenstädte des Alten Reiches erweist sich als schwierig. Die Pyramidenstädte hatten nach obigem Modell eine Umfassungsmauer, und die Lehre für Merikare spricht ebenfalls von den Befestigungsanlagen der Pyramidenstadt *Ḏd-s.wt-Ttj*[109]. Kompakte Siedlungsweise und eine Umfassungsmauer haben aber auch die oben behandelten Priestersiedlungen oder die Arbeitersiedlungen von Deir el-Medineh und Amarna, während die Stadt Amarna selbst gar keine Umfassungsmauer hat. Die Größe der Pyramidenstädte reicht an die Größe von Elephantine im Alten Reich heran[110]. Eine Konzentration von Handwerk, Magazinen und Waren läßt sich archäologisch nicht überprüfen, ebensowenig wie die Existenz eines eigenen Tempels außer dem Totentempel des jeweiligen Königs. Ökonomische Grundlage der Pyramidenstädte sind laut Dahschurdekret die Teilnahme am königlichen Totenkult und die Landwirtschaft. Die Bewohner differieren nach Berufen und sozialem Status. Die Pyramidenstädte *Ḫʿj-Snfrw* und *ꜣḫ.t-Ḫwfw* hatten eigene Rechtsinstanzen, deren Kompetenzbereich aber auf die jeweilige Stadt begrenzt ist.

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[105] Zum Problem vgl. R. Stadelmann, in: *LÄ* V, Sp. 10–11, s.v. *Pyramidenstadt*, besonders Anm. 33.

[106] W. Helck, in: *MDAIK* 15, 1957, S. 91; ders., *LÄ* I, Sp. 374–375, s.v. *Arbeitersiedlung*.

[107] B.J. Kemp, *Ancient Egypt. Anatomy of a civilization*, London 1989, S. 141–149.

[108] M. Bietak, in: K. Weeks (Hg.), *Egyptology and the Social Sciences*, Kairo 1979, S. 97–144; ders., in: *150 Jahre DAI*, 1981, S. 68–78.

[109] E 101–103, vgl. J.F. Quack, *Studien zur Lehre für Merikare*, *GOF* IV.23, Wiesbaden 1992, S. 60–61.

[110] Die Ostinsel ist im Alten Reich knapp 20 000 m² groß, vgl. W. Kaiser et al., in: *MDAIK* 55, 1999, S. 234–235, Abb. 55.

Bietak ist in erster Linie an dem archäologischen Aussehen einer Stadt interessiert, um auf diese Weise Städte von Dörfern zu unterscheiden und den urbanen Charakter Ägyptens zu etablieren. Andere Ansätze charakterisieren Städte im Rahmen des Siedlungsgefüges eines Staates. Während Stadtstaaten eine sogenannte 'primate' Verteilung von Siedlungen mit einer großen Zentralstadt und vielen sehr kleinen Siedlungen im Umland aufweisen, habe sich Ägypten zu einem Flächenstaat entwickelt, dessen Siedlungsgefüge durch eine graduelle Größenhierarchie gekennzeichnet sei[111]. Davon geht auch B. Trigger aus, doch legt er seiner Siedlungshierarchie weniger die Größe als den Grad der professionellen Spezialisierung der Bewohner und die Bandbreite der Funktionen einer Siedlung zugrunde[112]. Die Städte Ägyptens seien bis zum Beginn des Neuen Reiches relativ klein gewesen und von spezialisierten Handwerkern, Elitefunktionären und dem Kultpersonal des lokalen Tempels bewohnt worden. Ihren Unterhalt bestritten die Einwohner nicht durch eigene Landwirtschaft, sondern von Abgaben der umliegenden Siedlungen. Mit Hinweis auf eine Zensus-Erhebung von 1947 in Ägypten hat Kemp die Städte Ägyptens aber bereits zu Recht als landwirtschaftliche Städte, deren Bewohner mehrheitlich in der Landwirtschaft tätig sein können, bezeichnet[113].

Die Pyramidenstädte unterscheiden sich von den Städten dieses Siedlungsmodells. Tatsächlich werden sie von Leuten bewohnt, die mehrheitlich vom primären Arbeitssektor dissoziiert und professionell spezialisiert sind. Aber als Einkommensquelle dienen die eigene Feldarbeit und die Teilnahme am Tempelkult[114]. Ökonomisches Hinterland sind mittelbar die Domänen, die Abgaben für den königlichen Totenkult liefern. Aufschlußreich ist der Hinweis Triggers auf die Funktion von Siedlungen. Die Funktion von Städten läßt sich als die eines Zentralortes für umliegende Siedlungen beschreiben[115]. Sie reagieren auf die ökonomischen, politischen und demographischen Impulse ihres Umfeldes und auf siedlungsinterne Bedürfnisse. Sie bleiben daher über Jahrhunderte bestehen, wenngleich sich der Siedlungsschwerpunkt im Laufe der Zeit verlagern kann[116].

Archäologisch schlägt sich die zentralörtliche Funktion in der Kontinuität von zentralen Institutionen auf der einen Seite und der Wandlungsfähigkeit des übrigen Siedlungsgebietes auf der anderen Seite nieder. Auf Elephantine läßt sich dieses Phänomen am kontinuierlichen Bestehen des Satettempels[117] und dem diachronen Funktionswandel auf der Westinsel und der Südflanke der Weststadt sowie der Zunahme der Bevölkerungsdichte südlich des späten Chnumtempels verfolgen[118]. Dagegen tendieren funktional explizit determinierte Siedlungen dazu, die Funktionen einzelner Siedlungsflächen im Laufe der Zeit beizubehalten.

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[111] B.J. Kemp, in: *Antiquity* 51, 1977, S. 196–200.

[112] B.G. Trigger, in: H.S. Smith (Hg.), *Mélanges offerts à Jean Vercoutter*, Paris 1985, S. 343–353.

[113] B.J. Kemp, in: *Antiquity* 51, 1977, S. 196.

[114] B.J. Kemp, in: P.J. Ucko/R. Tringham/G.W. Dingham (Hg.), *Man, settlement and urbanism*, London 1972, S. 657–680.

[115] R. Müller-Wollermann, in: *ZÄS* 118, 1991, S. 48–54; H. Jankuhn, *Einführung in die Siedlungsarchäologie*, Berlin 1977, S. 138–147.

[116] B.J. Kemp, in: *Antiquity* 51, 1977, S. 185–196.

[117] W. Kaiser, in: *MDAIK* 33, 1977, S. 64–68.

[118] Westinsel: Königliche Anlage der 3./4. Dynastie (Stratum D) – Handwerkszone der 4./5. Dynastie (Stratum C) – Friedhof des späten Alten Reiches und der 1. Zwischenzeit (Stratum B) – Siedlungsschutt des Mittleren Reiches (Stratum A), vgl. S.J. Seidlmayer, in: *MDAIK* 38, 1982, S. 284–306; ders., in: *MDAIK* 40, 1984, S. 181–184. Südflanke der Weststadt: Verwaltungs-/Wohnbereich der frühen 3. Dynastie – Steinwerkstatt der späten 3. Dynastie – Tierhaltung in der 4. Dynastie, vgl. M. Ziermann, in: *MDAIK* 55, 1999, S. 71–81. Zunahme der Bevölkerungsdichte südlich des späten Chnumtempels, vgl. M. Ziermann, in: *MDAIK* 51, 1995, S. 121–128.

Die Pyramidenstädte des Alten Reiches sind als Städte mit (geplanter) Wohnhausarchitektur, einer Stadtmauer, einer Bevölkerung mit verschiedenen Berufen, einer eigenen Verwaltung und einem Stadtvorsteher, der dieselbe Titulatur wie die Stadtvorsteher gewachsener Städte trägt, geplant worden. Aber sie haben in der Regel keine zentralörtliche Funktion für die Bewohner ihres Umlandes entwickelt. Die Funktion der beiden Pyramidenstädte von Dahschur ist laut Dahschurdekret der Königskult[119]. Daher gehen die Pyramidenstädte zusammen mit dem Alten Reich unter, als diese Funktion erlischt. Nur fünf Pyramidenstädte des Alten Reiches werden noch in späterer Zeit genannt. *Ꜣḫ.t-Ḫwfw* scheint im Mittleren Reich eine marginale Siedlung am Wüstenrand gewesen zu sein[120]. Die nördliche Pyramidenstadt Snofrus in Dahschur könnte bei der Wiederbelebung Dahschurs als Königsnekropole im Mittleren Reich eine logistische Funktion gehabt haben. Die beiden Pyramidenstädte *Ḏd-s.wt-Ttj* und *Mn-nfr-Mry-Rꜥ.w* haben auf Grund ihrer Nähe zu *Ỉnbw-ḥḏ*, dem einzigen Zentralort dieser Region[121], weiterbestanden und diesem ihren Namen verliehen. Abseits dieses Ballungszentrums hat sich *Ḏd-Snfrw* bis ins Mittlere Reich gehalten, da es als einzige größere Siedlung der Region zentralörtliche Funktion übernommen haben könnte.

Siedlungstypologische Modelle hängen wesentlich von der Fragestellung ab, die zu ihrer Entwicklung geführt hat[122]. Die obige Diskussion streift Fragen zur Siedlungsgeographie, Ideologiegeschichte und zur lebensweltlichen Organisation (Wohnsiedlung *vs.* Arbeitssiedlung). Gemeinsam ist den hier vorgestellten Siedlungen ihr funktionaler Kontext zu den Pyramiden des Alten Reiches. Werkstätten, Baustellen-, Arbeiter- und Priestersiedlungen sind ebenso wie Pyramidenstädte funktional explizit determiniert. Daher erweist sich in dem hier behandelten Zusammenhang die Bindung der siedlungstypologischen Frage an die Funktion einer Siedlung als sinnvoll.

Abstract

This paper will discuss the archaeological remains of seventeen settlement sites near the Old Kingdom pyramids. They are classified as pure industrial sites, short termed settlements for workers, long termed settlements for workers and their families, priests´ settlements, and pyramid towns. The archaeology of pyramid towns is reconstructed on the basis of the analogy between Kahun and the settlement attached to the tomb of Queen Khentkaus in Giza. Though pyramid towns share some characteristics of Egyptian towns, they differ in function.

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[119] So das Dahschurdekret, vgl. *Urk.* I, 213.8–12 und das Dekret aus dem Taltempel des Mykerinos, vgl. *Urk.* I, 278.8–11; Goedicke, *Königl. Dokumente*, S. 148–154.

[120] Wildung, *Rolle äg. Könige*, S. 126 (Anm. 3) und S. 162–163.

[121] D.G. Jeffreys/A. Tavares, in: *MDAIK* 50, 1994, S. 143–173; S.J. Seidlmayer, in: A.M. Donadoni Roveri/F. Tiradritti (Hg.), *Kemet. Alle sorgenti del tempo, Katalog der Ausstellung vom 1.3. bis 28.6. 1998 im Museo Nazionale Ravenna*, Mailand 1998, S. 121–124.

[122] Die Diskussion konzentriert sich schwerpunktmäßig auf den Zusammenhang zwischen Urbanisierung und Staatsentstehung, vgl. die bibliographischen Angaben bei S.J. Seidlmayer, in: J. Spencer (Hg.), *Aspects of Early Egypt*, London 1996, S. 108 sowie D. Franke, in: M. Jansen/J. Hoock/J. Jarnut (Hg.), *Städtische Formen und Macht* 1, Aachen 1994, S. 50–51.

The Wooden Statue of Nebetia from Kom Medinet Ghurab

By Biri Fay

(Tafeln 1–6)

The hieroglyphs carved on the base for this statue of a naked young woman give only her name, Nebetia (Taf. 1–3, Fig. 1)[1]. Although the date of the statue has been established through the context of its discovery, and verified by its distinctive style, the specific combination of features the figure presents is still enigmatic.

Nebetia's statue was discovered in 1900 along with five other wooden statues representing women at Kom Medinet Ghurab[2], a site near the entrance to the Fayum. Upon learning of the find, the French Egyptologist Émile Chassinat[3] realized its significance and reconstructed details of the discovery as far as was possible. According to local diggers, all six figures came from a tomb that also contained various small items[4], two cosmetic containers bearing the names of Amenhotep III, his wife Tiyi, and the prenomen of their son Amenhotep IV, the future Akhenaten.

It is unlikely that these six women, some of whom bore titles indicating high status, shared a common tomb[5], since three other tombs excavated at Ghurab about the same time did not contain multiple burials. One of them was a double burial, and the other two were single interments. The burial goods

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[1] From Kom Medinet Ghurab, formerly in the collection of Martine, Comtesse de Béhague. Height 18.3 cm, width 4.2 cm, depth 8 cm, depth of figure 5 cm, width of figure 3.8 cm, height of face 2.1 cm, width of face 1.6 cm, height of base 1.9 cm. Figure: dark reddish wood; base: dark brown wood. Traces of black and white paint on the eyes. Statuette constructed of separate pieces. Left arm, two parts joined at shoulder and elbow. Right arm. Front left foot separate, and missing outer toes. Right foot separate (?), missing large and inner toe. Break at right ankle probably incorrectly restored. Base carved out on underside and back, with light brownish mass covering surface of recess and was probably mounted on an additional base. A wooden object shaped like the blade of a knife accompanied the statue, and could fit in the closed fist, but is incongruous. The sides of the object bear a zigzag incised pattern.

I thank Georg Meurer, L. Joseph Stecher, and Marianne Eaton-Krauss for reading versions of this article and making valuable suggestions. Richard Fazzini and Edna Russmann at The Brooklyn Museum, Brooklyn, Dorothea Arnold and Claudia Farias at The Metropolitan Museum, New York, and Vivian Davies and Richard Parkinson at The British Museum, London generously assisted me at their respective institutions. Finally, I am grateful to Richard Parkinson for rendering Nebetia's inscription, and to the museums and private collectors for permitting me to illustrate their objects.

[2] Di. Arnold, in: *LÄ* II, 922–923.

[3] M. Bierbrier (revised by), *Who Was Who in Egyptology*, London 1995, pp. 95–96.

[4] The complete inventory as recorded by É. Chassinat, in: *BIFAO* I, 1901, pp. 225–234, Pls. I–III, includes: six female statuettes, a mirror, a dagger, a dish in the shape of a bound gazelle, two wooden cosmetic boxes, a Syrian ivory box, an alabaster vase, six wooden hair pins, six kohl containers, a blue faience eye, and a wooden shawabti. For a recent publication of a number of these objects see, A. Kozloff/B. Bryan (eds.), *Aménophis III, le Pharaon-Soleil*, Paris 1993, pp. 358–361, nos. 113bis.

[5] As pointed out by Do. Arnold, *The Royal Women of Amarna. Images of Beauty from Ancient Egypt*, New York 1996, p. 141, note 67.

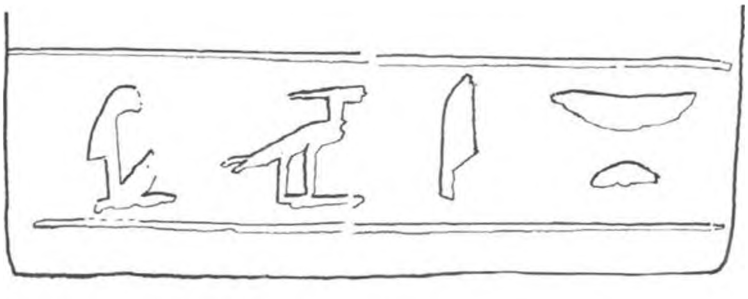

Fig. 1: Nebetia, Inscription on base (Richard Parkinson)

found in these tombs included wooden female figurines, and one of them yielded objects inscribed with the names of Amenhotep III and Tiyi[6]. Therefore, although local diggers told Chassinat that the objects naming the six different women which he recorded were found together, they actually may have been gathered from a number of different tombs. Alternatively, they represent a cache with the contents of several tombs deposited in ancient (or modern) times.

The function of Kom Medinet Ghurab during the late 18th Dynasty was apparently manifold. Ghurab is frequently described as the site of a palace or harem of Amenhotep III, because wooden figures representing the king and his wife, Tiyi, and a number of objects inscribed for them were found there[7]. According to this theory, the six female figurines depict harem women. Alternative theories suggest that Kom Medinet Ghurab was the residence of Tiyi after the death of her husband[8], or the site of an Aten temple[9]. Most recently, it has been plausibly argued that one of the installations at the site was associated with the cult of the deified Amenhotep III[10]. Proponents of each theory cite plausible supporting evidence, and the reality appears to be a combination of these ideas[11]. Currently, what is certain is that high ranking women associated with the courts of Amenhotep III and his son Amenhotep IV were buried at Kom Medinet Ghurab at least as late as the early years of the Amarna Period.

Today, five of the six female statuettes catalogued by Chassinat are in museums or private collections. The Singer, Mi (Taf. 4a)[12], and an untitled lady, Tuty (Taf. 4b)[13], are in The Brooklyn Museum; the

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[6] For these tombs see, PM IV, pp. 114, 115. The stylistic similarity of the statuettes found in these burials is discussed by B. Bryan, in: A. Kozloff/B. Bryan (eds.), *Egypt's Dazzling Sun, Amenhotep III and His World*, Cleveland 1992, p. 259, no. 2.

[7] For this material see, L. Borchardt, *Der Porträtkopf der Königin Teje im Besitz von Dr. James Simon in Berlin*, Leipzig 1911.

[8] See Do. Arnold, *op. cit.*, p. 141, note 67, for a review of these opinions.

[9] L. Habachi, in: *MDAIK* 20, 1965, p. 82, and most recently, M. Zecchi, *Materiali e studi* 7, Imola 2001, pp. 20–181.

[10] Do. Arnold, *op. cit.*, p. 28, with notes on page 141, with support for this theory. See also, M. Zecchi, *op. cit.*, p. 182, and note 1205.

[11] As Di. Arnold, *The Encyclopedia of Ancient Egyptian Architecture*, London 2003, p. 101, sums this up in his entry (Gurob), "A town, fortress, palace and temple precinct and necropolis of the New Kingdom (Thutmosis III–Ramesses III) … ".

[12] Brooklyn 47.120.3, height 15.5 cm: B. Bryan, in: A. Kozloff/B. Bryan (eds.), *Egypt's Dazzling Sun, Amenhotep III and His World*, Cleveland 1992, pp. 258–259, no. 50.

[13] Brooklyn 54.187, height 20.3 cm; J. Cooney, *Five Years of Collecting*, 1956, pp. 7–9, Pls. 19–21; B. Bryan, in:

Chief of the Household, Tiya, is in The Metropolitan Museum (Taf. 4c)[14]. The Chantress of Amun, Maia[15], and Nebetia are in private collections. The sixth female statuette is apparently fragmentary and according to Chassinat, like Nebetia, naked[16]. Its present location is not known, but it has been suggested that a wooden figure recently sold at auction is the missing statuette[17].

Nebetia is by far the most unusual figure of the group because the combination of adult nudity and coiffure is unparalleled. Female nudity is generally associated with low status, or professions like dancing and music-making, and the round wig with its heavy sidelock exemplifies a style usually worn by the princesses of the period[18]. She stands with her legs braced, the left leg advanced in an attitude similar to the stance of the Amarna princesses.

Her right arm is held at her side with the palm of the hand turned inward. The left arm is bent at the elbow and extended in front of her body with the hand clenched to hold an object now lost. Chassinat suggested that the accessory was a sistrum because of the similarity between this figure and a relief representation of a naked Amarna princess[19].

Nebetia's head is poised on an unusually long, slender neck, and her heart-shaped face with broad cheeks narrows sharply toward the small chin. The upper lip is full and pointed; the lower lip is less full, and slightly drooping and recalls the appearance of Amenhotep III's lips[20]. A broad collar may originally have been painted around Nebetia's chest and shoulders.

One other female statuette in the group (Taf. 4a)[21], and the wooden head of Queen Tiyi (Taf. 5a)[22], also found at Kom Medinet Ghurab, have similarly shaped faces. Because they also share other similarities, the same sculptor probably carved all of them[23]. Nebetia's large, oblique eyes are detailed in black and white paint (her brows were also touched in black), which lends the face an exotic, feline character. The way the lower edge of the eye merges directly into the cheek without a rim reinforces this impression. The wing-shaped clavicles, found on early Amarna Period representations in relief and sculpture[24], arch sharply from the base of the neck and contrast notably with the sensual

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A. Kozloff/B.Bryan, *op. cit.*, p. 259, fig. 50a, (where the height is incorrectly given as 20.3 cm). Richard Fazzini and Edna Russmann kindly provided information about the two ladies in The Brooklyn Museum, and excellent photographs.

[14] New York, MMA 41.2.10, height 24 cm; Do. Arnold, *op. cit.*, pp. 24, 72, 135, figs. 20, 64, catalogue no. 46. My thanks to Dorothea Arnold and Claudia Farias for answering my many questions and providing the fine photograph of Tiya.

[15] Private Collection, height 35.5 cm; Do. Arnold, *op. cit.*, pp. 127, 136, fig. 124, catalogue no. 54.

[16] É. Chassinat, in: *BIFAO* I, 1901, p. 227, no. 6, "Fragment de statuette de jeune fille nue".

[17] Sotheby's, *Antiquities*, New York, 7 December 2001, pp. 20–22, lot 22, height 17.8 cm, illustrated in color. John Cooney's unpublished notes are quoted in the Sotheby's catalogue. Cooney suggests that a wooden sculpture in the Brummer collection (the figure sold at Sotheby's) is the statue cited by É. Chassinat as a naked female. However, the male figure sold at Sotheby's is not naked, but wears a pleated kilt.

[18] B. Bryan, in: A. Kozloff/B. Bryan, *op. cit.*, p. 260, concludes Nebetia is a serving girl because some wear sidelocks in contemporary banqueting scenes. These serving women, however, do not wear a round wig.

[19] É. Chassinat, *op. cit.*, p. 230.

[20] Compare, for example, A. Kozloff/B. Bryan, *op. cit.*, pp. 122 and 123.

[21] Brooklyn 47.120.3; B. Bryan, in: A. Kozloff/B. Bryan, *op. cit.*, pp. 258–259, no. 50.

[22] Berlin 21834; most recently, Do. Arnold, *op. cit.*, pp. 28–35, 129, figs. 23, 25, 26, catalogue no. 1.

[23] As I noted in: J. Karig, *Ägyptische Kunst aus dem Brooklyn Museum*, Berlin 1976, catalogue no. 38. See now B. Bryan, in: A. Kozloff/B. Bryan, *op. cit.*, p. 259.

[24] Commonly found on early Amarna Period royal representations, a painted limestone statuette of a seated non-royal man from Amarna also clearly shows this feature, Cairo JE 53249; E. Russmann (ed.), *Egyptian Sculpture*, Austin 1989, p. 120, no. 56.

forms of the lower half of her body. The gentle swell of the abdomen is punctuated by the horizontal navel; two dimples on her back, midway between her hips and rounded buttocks, are a charming detail occasionally included in representations of girls and young women during the New Kingdom. The unusual figure of the Lady Henut-taoui in the Gulbenkian Museum (Taf. 5b–c)[25] exhibits something of Nebetia's feline character. The shape and size of her eyes are similar, as are the elongated proportions of her body and the distinctly elegant handling of the wood's surface suggesting that she too was carved by Nebetia's sculptor. A talented carver would surely have been able to adjust easily to stylistic changes that were occurring just at this time, as well as to the specific wishes of his clients.

Crimped locks radiate from the crown of Nebetia's wig, and three tiers of curls define its edge and frame her face. At the forehead, touches of black paint presumably represent her natural hair. The massive sidelock of long, crimped bunches of hair bound by a gold clasp, hangs down to the level of her nipples, completely covering her right shoulder.

Until the end of the Amarna Period, there is a single exception[26] to the rule that only princesses who have reached puberty but who are apparently unmarried wear this type of round wig with the sidelock. The style was first made popular by Amenhotep III's daughters, and was subsequently worn by the daughters of Akhenaten and Nefertiti (Taf. 6a)[27]. Like the princesses who wear it, Nebetia too has experienced puberty. The proportions of her well-developed body with its conical breasts, her narrow arms, rounded abdomen, low rounded buttocks, and fleshy thighs diminishing to attenuated calves have much in common with representations of royal women during the early years of Akhenaten and Nefertiti's reign[28]. But the princesses who wear this wig are clothed in elaborately pleated robes; Nebetia is naked.

Nudity in ancient Egypt was usually associated with childhood or lower social status[29]. Nebetia is obviously not a child, and her position in society, by analogy with the other women represented by such statuettes, was almost certainly elevated. It has been suggested that Nebetia was a serving girl[30], since there are depictions in relief and sculpture where serving girls are shown naked except for jewelry. However, wooden figures of serving girls are usually not identified by name; nor do they wear the round wig with the heavy sidelock; nor are they represented in this very traditional and formal attitude.

Nebetia's statuette appears to combine the nudity of prepubescent Amarna princesses with the hairstyle of those who have reached puberty but who are unmarried, a juxtaposition that does not occur in representations of royal females at any time. The naked Amarna princesses are children, Nebetia is

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[25] Gulbenkian Collection, Lisbon Inv. 129, height 29 cm; M.H. Assam, *Colecção Calouste Gulbenkian, Arte Egípcia*, Lissabon 1991, pp. 60–61, no. 14; A. Kozloff/B. Bryan, *op. cit.*, p. 258, fig. 49b. My thanks go to Maria Rosa Figueiredo, Chief Curator, Calouste Gulbenkian Museum for speeding my request for photographs of lady Henut-taoui.

[26] Tama (Cairo JE 35057), a clothed female figure also found at Kom Medinet Ghurab wears a round wig with a sidelock, too, but without the layering; E. Russmann, *op. cit.*, p. 111, no. 52. For a cosmetic container from Tama's burial and a summary of the find, see A. Wiese, in: M. Page-Gasser/A. Wiese, *Ägypten – Augenblicke der Ewigkeit: Unbekannte Schätze aus Schweizer Privatbesitz*, Mainz 1997, pp. 139–140.

[27] Paris, Louvre E 14715; most recently Do. Arnold, *op. cit.*, pp. 121–124, 131, no. 13, figs. 117–119. I am grateful to Christiane Ziegler and Catherine Bridonneau for providing photographs of the Louvre princess.

[28] See B. Bryan, in: A. Kozloff/B. Bryan, *op. cit.*, pp. 258–259, for a discussion of the figure's Amarna proportions.

[29] P. Behrens, *Nacktheit*, in: *LÄ* IV, 292–294.

[30] See B. Bryan, in: A. Kozloff/B. Bryan, *op. cit.*, p. 260, no. 51.

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clearly an adult. The inscription on a very slightly earlier wooden figure of a woman named Tit in Leiden (Taf. 6b)[31] offers a plausible explanation for the adult nudity of Nebetia's statuette.

The Leiden figure, like Nebetia, represents a naked young woman in a traditional attitude[32]. The inscription on the base identifies the woman as Tit, and, like Nebetia, she has no title. The text around the sides of the base reveals that her parents, Hati and Pia, dedicated the statuette. If Tit was unmarried when she died, it would explain both the lack of even the simple title Mistress of the House, and the dedication of the statue by her parents. Her adult nudity could be intended to show that although she had reached puberty, she was not yet married[33]. If these suggestions are correct, Nebetia, like Tit in Leiden, may have been a young, unmarried woman who died soon after she reached puberty.

The name Nebetia is not common. The three other attestations are all contemporary with the reign of Amenhotep III or the early years of his son Amenhotep IV/Akhenaten, like this statuette. The highest-ranking person called Nebetia was a King's Daughter, the child of the King's Son Siatum, who was a son of Tuthmosis IV or Amenhotep III. Siatum's daughter Nebetia is generally believed to have died during Amenhotep III's reign[34]. The Nebetia represented by the statuette may have been named after her.

Two women labeled simply, Mistress of the House, Nebetia, are depicted on a stela in the British Museum (Taf. 6c) that is stylistically datable to the end of the reign of Amenhotep III or the early Amarna Period[35]. As T.G.H. James has pointed out, many of the individuals represented on this stela have rare names, including the husbands of both Nebetias. All may have been foreigners employed by the king. Although the woman represented in this statue cannot be identified with one of the Nebetias on the stela, she too may have been a foreigner[36].

Abstract

The wooden statue of Nebetia from Kom Medinet Ghurab presents a number of anomalies. Comparison with contemporary monuments suggests that she was a young woman who died before marrying, and that she may have been a foreigner.

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[31] Leiden L.IX.6, height 31.5 cm; Boeser, *Leiden* 12, pp. 7–8, no. 36, Pl. VIII; H.D. Schneider (ed.), *De Egyptische Oudheid*, Leiden 1981, p. 107, no. 105; E. Schwinzer et al. (eds.), *Leben und Tod im alten Ägypten: Meisterwerke aus dem Reichsmuseum für Altertümer in Leiden*, Leiden 1999, p. 155, no. 276. Tit can be dated stylistically to the later years of Amenhotep III. The photograph of Tit was kindly provided by Maarten Raven.

[32] Tit appears to have worn only a narrow girdle around her hips, and a broad collar and perhaps bracelets.

[33] Whether nudity here magically offers the assurance of rebirth is not known.

[34] For this woman see B. Bryan, *The reign of Tuthmose IV*, Baltimore 1991, p. 67, who reads the name as it occurs on a wooden label in Berlin 2146 as Nebiu. See also G. Roeder, *Ägyptische Inschriften aus den Königlichen Museen zu Berlin* II, Berlin 1924, p. 294, and A. Dodson/J.J. Janssen, in: *JEA* 75, 1989, pp. 136–137, render the name of this King's Daughter Nebetia. These references to the King's Daughter Nebetia were brought to my attention by Georg Meurer, Berlin.

[35] London, BM 313, height 56 cm; T.G.H. James, *Hieroglyphic Texts from Egyptian Stelae etc.* 9, London 1970, pp. 65–66, Pl. L, 1. Richard Parkinson, The British Museum, kindly provided me with information relating to this stela.

[36] The presence of Hittite ladies at Kom Medinet Ghurab in the 19th Dynasty is discussed by J. Piloti, in: *GM* 182, 2001, pp. 107–111, citation on p. 111; "Gurob undoubtedly had important links with the rest of the Ancient Near East. Both the 'Burnt Groups' and the papyri point strongly to the presence of Hittites at Gurob in the Nineteenth Dynasty." Marianne Eaton-Krauss kindly brought this reference to my attention.

Eine saitische Votivstele aus dem Tempelbezirk von Buto/Tell el-Fara'in

Von Frank Förster

(Tafel 7)

Im Verlauf der Frühjahrskampagne des Jahres 1997 wurden bei den Grabungen des DAI Kairo in Buto/Tell el-Fara'in unter der Leitung von Dina Faltings[1] Untersuchungen im Tempelbezirk ('*Kôm* B') durchgeführt, die ursprünglich von der Frage nach der Existenz etwaiger Vorgängerbauten bzw. Begräbnisstätten geleitet waren[2]. Obwohl die Grabungsaktivitäten im Verbund mit Probebohrungen diesbezüglich nur einen Negativbefund für das untersuchte Areal erbrachten, konnten einige wesentliche Ergebnisse hinsichtlich der spätzeitlichen Tempelanlage erzielt werden[3]. Als herausragender Fund der Grabungen soll im folgenden eine im Schnitt C4 aufgefundene kleine Votivstele aus der Saitenzeit vorgestellt werden (Taf. 7 und Abb. 1)[4].

Der Schnitt liegt etwa auf Höhe der südwestlich-nordöstlich verlaufenden Tempelachse nahe dem Zentrum des durch die Umfassungsmauer abgegrenzten heiligen Bezirks[5] und stellt die Weiterführung einer wahrscheinlich in den Jahren 1987–1989 von der Ägyptischen Altertümerverwaltung in Kooperation mit der Universität Tanta angelegten Grabungsfläche dar[6]. Die hier im Frühjahr 1997 durchgeführten Untersuchungen ergaben für diesen Bereich des Tempelareals vereinfacht ausgedrückt folgendes Bild: Auf den anstehenden, wohl pleistozänen Sand folgt eine ca. fünf Meter hohe künstliche Aufschüttung von reinem Gezirasand, bei dem es sich allem Anschein nach um den sogenannten 'Hohen Sand' zur Füllung des Fundamentgrabens eines Tempelbaus handelt[7]. Von diesem sind allerdings nur vereinzelt zerschlagene Blöcke und reliefierte Kalkmörtelfragmente in einer über dem Sand liegenden Zerstörungsschicht erhalten geblieben, von denen einige Kartuschen des Amasis tragen[8] – ein Befund, der in ähnlicher Form bereits im Verlauf der englischen Grabungen in den 1960er Jahren unter M.V. Seton-Williams festgestellt worden war[9]. Die Stele wurde mit der Schauseite nach Osten halbaufgerichtet inmitten dieser künstlichen Sandaufschüttung in der Südwest-Ecke des Schnittes vorgefunden, ganz in der Nähe einer Schüttlinse mit vorgeschichtlicher Keramik[10].

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[1] D. Faltings sei an dieser Stelle herzlich gedankt für ihr Vertrauen, mir die Stele zur Publikation zu überlassen. Für Diskussionen und Hinweise bin ich außer ihr Ph. Derchain und U. Verhoeven-van Elsbergen sehr verbunden.

[2] D. Faltings/P. Ballet/F. Förster/P. French/C. Ihde/H. Sahlmann/J. Thomalsky/C. Thumshirn/A. Wodzinska, *Zweiter Vorbericht über die Arbeiten in Buto von 1996 bis 1999*, in: *MDAIK* 56, 2000, S. 131–179 mit Taf. 15–18 (im folgenden *2. Vorbericht Buto* abgekürzt).

[3] Siehe *2. Vorbericht Buto*, S. 163–169.

[4] Kurzanzeige im Rahmen des *2. Vorberichts Buto*, S. 167 mit Taf. 16c.

[5] Vgl. den Übersichtsplan in *2. Vorbericht Buto*, Abb. 12 vor S. 163.

[6] Die Stelle war ausgewählt worden, um ein Abtragen meterdicker später Schichten zu umgehen und möglichst rasch potentielle Vorgängerbauten zu erreichen, vgl. *2. Vorbericht Buto*, S. 132 und 163. – Zu den ägyptischen Grabungen siehe F. Mekkawy, in: A. Nibbi (ed.), *Proceedings of the Colloquium, The Archaeology, Geography and History of the Egyptian Delta in Pharaonic Times, Wadham College 29–31 August 1988 = Discussions in Egyptology*, Special No. 1, Oxford 1989, S. 193–215.

[7] Zum Terminus siehe D. Arnold, *Lexikon der ägyptischen Baukunst*, München/Zürich 1994, S. 108; vgl. auch K. Martin, in: *LÄ* V, Sp. 378f. Speziell zum 'Hohen Sand' bei Spätzeitanlagen im Delta siehe A.J. Spencer, in: J. Ruffle/G.A. Gaballa/K.A. Kitchen (eds.), *Orbis Aegyptiorum Speculum: Glimpses of Ancient Egypt. Studies in Honour of H.W. Fairman*, Warminster 1979, S. 133.

Angesichts dieses Fundzusammenhangs, aber auch anderer Indizien[11] ist die Stele eindeutig in die Saitenzeit, mit hoher Wahrscheinlichkeit in die Regierungszeit des Amasis (570–526 v. Chr.), zu datieren[12] und als eine Art Votivgabe anzusehen, die anläßlich der Tempel(neu)gründung an diesem traditionsreichen Ort niedergelegt wurde.

Die recht kompakte, oben gerundete Stele aus Kalkstein[13] ist bei einer Stärke von max. 7,6 cm 18,8 cm hoch und 13,5 cm breit; ihr Gewicht beträgt 3,56 kg. Die Seitenflächen und besonders die Rückseite sind nur grob zurechtgehauen und zeigen deutliche Meißelspuren, während die Vorderseite recht sorgfältig für Dekoration und Beschriftung geglättet wurde. Dennoch sind auch hier Bearbeitungsspuren in waagerechter bzw. leicht schräger Führung sichtbar (gut erkennbar auf dem Photo Taf. 7).

Mit einem spitzen, scharfen Werkzeug sind im oberen Drittel ein Giebelfeld mit figürlichen Darstellungen und ihren Beischriften sowie darunter anschließend ein achtzeiliger Text in hieratischer Schrift eingeritzt worden, wobei die letzte Zeile nur etwa ein Drittel des zur Verfügung stehenden Raumes einnimmt. Bis auf kleinere Absplitterungen im Randbereich ist die Stele unversehrt erhalten; der größte Ausbruch am Beginn der ersten beiden Zeilen bestand offensichtlich schon vor der Beschriftung, da erst an seinem Anschluß das jeweils erste Zeichen eingeritzt wurde. Gleiches gilt für Unebenheiten und kleinere Löcher im Stein, in die deutlich die Ritzlinien hinein- bzw. hindurchführen. An einigen Stellen haben Verhärtungen bzw. kristalline Einschlüsse im Kalkstein dazu geführt, daß die Spitze des Werkzeuges weniger tief hineingetrieben werden konnte und daher die Linienführung nur entsprechend undeutlich in Erscheinung tritt[14].

Es fällt auf, daß die nur durch Zwischenräume voneinander abgegrenzten Zeilen eine unterschiedliche Dichtigkeit von Hieratogrammen[15] aufweisen: Jeweils die letzten Drittel der Zeilen 2, 3, besonders aber 4, 5 und 7 zeigen eine deutliche Drängung der Zeichen, und in Zeile 5 und 7 hat sich der Schreiber sogar gewissermaßen mit 'Subzeilen' beholfen, wohingegen beispielsweise Zeile 6 aus recht weitläufig verteilten Zeichenfolgen besteht und, wie bereits angemerkt, ganze zwei Drittel der für die

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[8] *2. Vorbericht Buto*, S. 164–166 mit Abb. 13–15.

[9] D.B. Redford *apud* M.V. Seton-Williams, *The Tell el-Farâ'în Expedition, 1968*, in: *JEA* 55, 1969, S. 18f. mit Abb. 3, vgl. auch S. 21 (22.).

[10] *2. Vorbericht Buto*, S. 132 und 163, Taf. 16c.

[11] Siehe die Bemerkungen zur Paläographie und zu den Priestertiteln unten.

[12] Zum Tempelbau mutmaßlich unter Amasis siehe M.V. Seton-Williams, in: *JEA* 55, 1969, S. 5–12, bes. S. 7f.; D. Arnold, *Die Tempel Ägyptens. Götterwohnungen, Kultstätten, Baudenkmäler*, Zürich 1992, S. 219f.; *2. Vorbericht Buto*, S. 163 sowie die unten in Anm. 27 genannte Literatur. Für saitenzeitliche Einzelfunde in Buto, auch aus anderen Regierungszeiten, vgl. unten Anm. 24.

[13] Kleinfund-Nummer 1191; Nr. 389 im Registerbuch der Ägyptischen Altertümerverwaltung. Die Stele wird im Inspektorat von Kafr el-Sheikh verwahrt.

[14] Besonders am Ende von Zeile 5 des Haupttextes.

[15] Begriff im Anschluß an U. Verhoeven, *Untersuchungen zur späthieratischen Buchschrift*, *OLA* 99, Leuven 2001, S. 1 (im folgenden als Verhoeven, *Späthieratische Buchschrift* abgekürzt). – Es sei an dieser Stelle darauf hingewiesen, daß der von Verhoeven erstellten „Paläographischen Liste" (Kap. II.2.7., S. 101–225), die bei der Besprechung des Stelentextes wiederholt herangezogen wird, ausschließlich Schriften auf Papyrus zugrunde liegen (*op. cit.*, S. 61); „(a)ndere Schriftträger bewirken einen anderen Duktus und müssen daher mit Vorbehalten versehen werden" (*loc. cit.*).

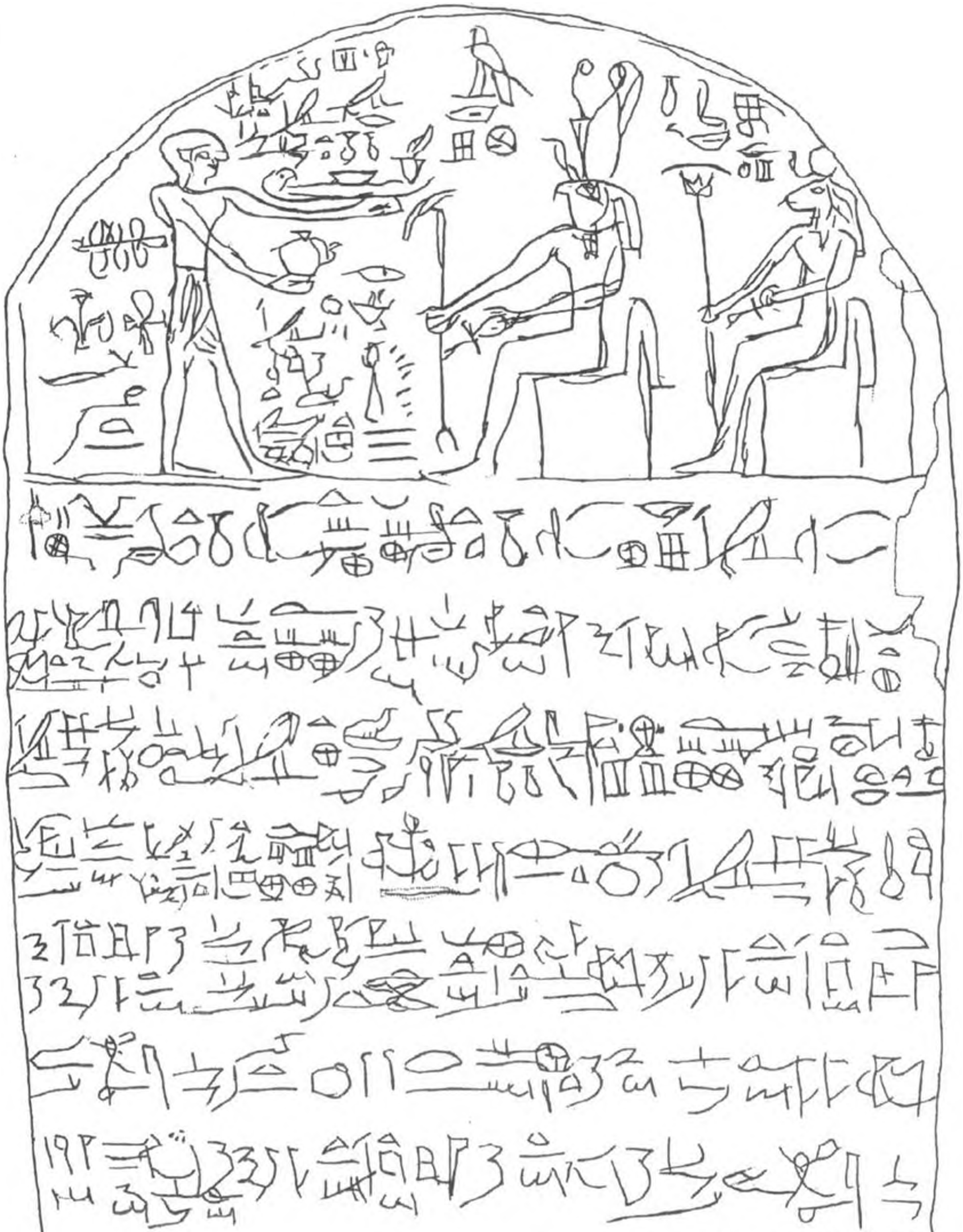
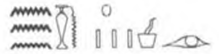


Abb. 1: Umzeichnung der Stele

letzte Zeile verfügbaren Fläche unbeschriftet blieben. Diese Verteilung zeigt, daß der Beschriftung – wenn überhaupt – nur ein relativ grobes Konzept hinsichtlich einer ausgewogenen Zeichen- bzw. Zeilenverteilung zugrunde lag. Trotz der Unregelmäßigkeiten und der gelegentlich flüchtig wirkenden Ausführung ist es bemerkenswert, daß es dem Verfasser gelungen ist, einen aus rund 300 Schriftzeichen bestehenden Text auf einer Fläche von nur ca. 13,5 x 12 cm unterhalb des Giebelfeldes unterzubringen. Nach VERHOEVEN[16] können der Saitenzeit bislang nur vier auf Stein geschriebene hieratische Texte zugewiesen werden, davon zwei mit Tinte geschrieben und zwei wie bei unserer Stele eingraviert[17].

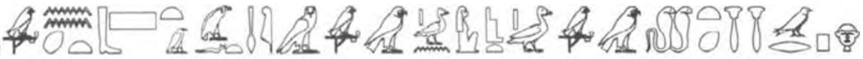
Das Giebelfeld wird eingerahmt von einer umlaufenden, jedoch aufgrund der teilweise leicht gewölbten Kanten bzw. der figürlichen Dekoration rechts nicht überall durchgezogenen Ritzlinie, die in ihrem oberen Bereich in etwa parallel zu den Konturen des Steines verläuft, während die horizontale Linie die Grenze zum Haupttext markiert und gleichzeitig die Standlinie der drei dargestellten Figuren bildet.

Die stehende Figur links scheint nur mit einem kurzen Schurz bekleidet zu sein; sie trägt offenbar kurzes Haar und hält in den ausgestreckten Armen einen brennenden Räucherarm, dessen rückwärtiges Ende ein Falkenkopf ziert, sowie ein Gefäß mit Ausgußtülle. Die linksläufigen Beischriften zum Opfernden verteilen sich auf die Flächen vor, über und hinter ihm und bestehen aus den drei Teilen (1) Angabe der Opferhandlung, (2) Identifikation durch Titel, Name und Filiation und (3) sogenannter Schutzformel. Dabei steht für den relativ umfangreichen zweiten Bestandteil, der aus drei kleinen, senkrecht verlaufenden Zeilen oberhalb des Räucherarms sowie daran anschließend einer Zeile unter der Hand mit dem Libationsgefäß besteht, nur verhältnismäßig wenig Platz zur Verfügung, so daß die Beschriftung hier auf Kosten der Klarheit klein und wenig tief eingeritzt ausfallen mußte.

(1) 

ir(*t*) *snṯr ḳbḥw*

„Bereiten einer Weihrauch- und Wasserspende"

(2) (?) (?) 

ḥry-P wr-Wꜣḏty Ḥr-sꜣ-St sꜣ n Ḥr-m-mꜣꜥ-ḫrw mwt.f Tꜣ-(*nt-*)*šp*(*w*)*-n-Nt* (?)(a)

(a) Die Lesung der letzten Zeichen des Namens (vgl. RANKE, *PN* I, S. 363.4; II, S. 326.9) ist nicht ganz klar, wird aber durch die (vollere) Schreibung in Zeile 4 gestützt, siehe dort mit Anm. (i) zur Transkription.

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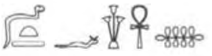
[16] VERHOEVEN, *Späthieratische Buchschrift*, S. 21.

[17] Bei den Objekten mit eingravierter Inschrift handelt es sich um die Schenkungsstelen 26.0.6 (Mus. Kairo JE 28731; ohne Königsnamen) und 26.1.19 (Privatsammlung; Psammetich I.) nach der Kennzeichnung von D. MEEKS, *Les donations aux temples dans l'Égypte du Ier millénaire avant J.-C.*, in: E. LIPINSKI (ed.), *State and Temple Economy in the Ancient Near East* II, *OLA* 6, Leuven 1979, S. 674. Während letztere in einer recht hohen Qualität dekoriert und beschriftet ist (siehe die Neubearbeitung von M. ÉTIENNE/D. FAROUT, *La stèle 26.1.19 retrouvée*, in: *RdE* 44, 1994, S. 19–31 mit Photo Taf. 2), handelt es sich bei 26.0.6 um ein deutlich minderwertiges Stück mit „sehr inkorrekt geschriebene(r) Inschrift" (vgl. W. SPIEGELBERG, *Neue Schenkungsstelen über Landstiftungen an Tempel*, in: *ZÄS* 56, 1920, S. 59f. mit Taf. VI [rechts] vor S. 57; Zitat auf S. 60), das unserer Stele qualitativ und auch hinsichtlich der Größe näher steht.

„Der *ḥry-P*[(a)] und *wr-W3ḏty*[(b)] Harsiese, Sohn des *Ḥr-m-m3ʿ-ḫrw* und seiner Mutter *T3-(nt-)šp(w)-n-Nt* (?)"

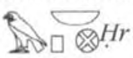
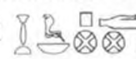
(a) Zu diesem Priestertitel („Oberster von Pe" o.ä.), der auch auf einem in Buto gefundenen Relieffragment der 30. Dynastie vorkommt (H. Gauthier, in: *ASAE* 21, 1921, S. 27–32 mit Taf. II; zur Datierung P. Vernus, *Athribis. Textes et documents relatifs à la géographie, aux cultes, et à l'histoire d'une ville du Delta égyptien à l'époque pharaonique*, in: *BdE* 74, Le Caire 1978, S. 192), siehe H. De Meulenaere, in: *BIFAO* 62, 1964, S. 166f.

(b) Zum Titel *wr-w3ḏty* („Großer der beiden Uräen/Kronengöttinnen" o.ä.) bzw. *ḥm Ḥr wr-w3ḏty*, der eng mit Horus von Pe verbunden ist und vor der 26. Dynastie nicht belegt zu sein scheint, siehe D.B. Redford, in: *BES* 5, 1983, S. 87 mit weiterführenden Literaturangaben in Anm. 151 sowie zuletzt C. Traunecker, in: W. Clarysse/A. Schoors/H. Willems (eds.), *Egyptian Religion – The Last Thousand Years, Part II. Studies Dedicated to the Memory of Jan Quaegebeur, OLA* 85, Leuven 1998, S. 1215ff., bes. S. 1216 (mit Anm. 128) und S. 1226–1229 (J. Quaegebeur †). Zum Vorkommen auf Denkmälern aus Buto siehe D.B. Redford *apud* M.V. Seton-Williams, in: *JEA* 55, 1969, S. 19–21. Nach H. De Meulenaere, in: *BIFAO* 62, 1964, S. 166 handelt es sich bei *wr-w3ḏty* ursprünglich um ein Epitheton des Horus, das dann auf einen seiner Priester übergehen konnte. – Beide Titel erscheinen auch in Zeile 3 des Haupttextes.

(3) 

s3 ʿnḫ ḥ3.f ḏt

„Schutz und Leben mögen hinter ihm sein ewiglich"

Die Opferhandlung Harsieses ist gerichtet an zwei im rechten Anschluß vor ihm thronende Gottheiten, die die rechtsläufigen Beischriften als  *Ḥr nb-P* „Horus, Herr von Pe" und  sic *W3ḏt nb(t)-P-Dp* „Wadjet, Herrin von Pe und Dep" ausweisen. Horus trägt die Doppelkrone mit Uräusschlange sowie einen Halsschmuck und hält in den leicht angewinkelten Armen Was-Szepter und Anch-Zeichen. Die löwenköpfige Wadjet[18] ist mit Sonnenscheibe und Uräus bekrönt und hält ein Papyrus-Szepter und ebenfalls ein Anch-Zeichen in Händen; auch sie scheint einen Halsschmuck zu tragen. Angaben einer Bekleidung sind bei beiden Figuren nicht zu erkennen.

Der anschließende Text setzt unmittelbar ein mit einer Anrufung der dargestellten Gottheiten:

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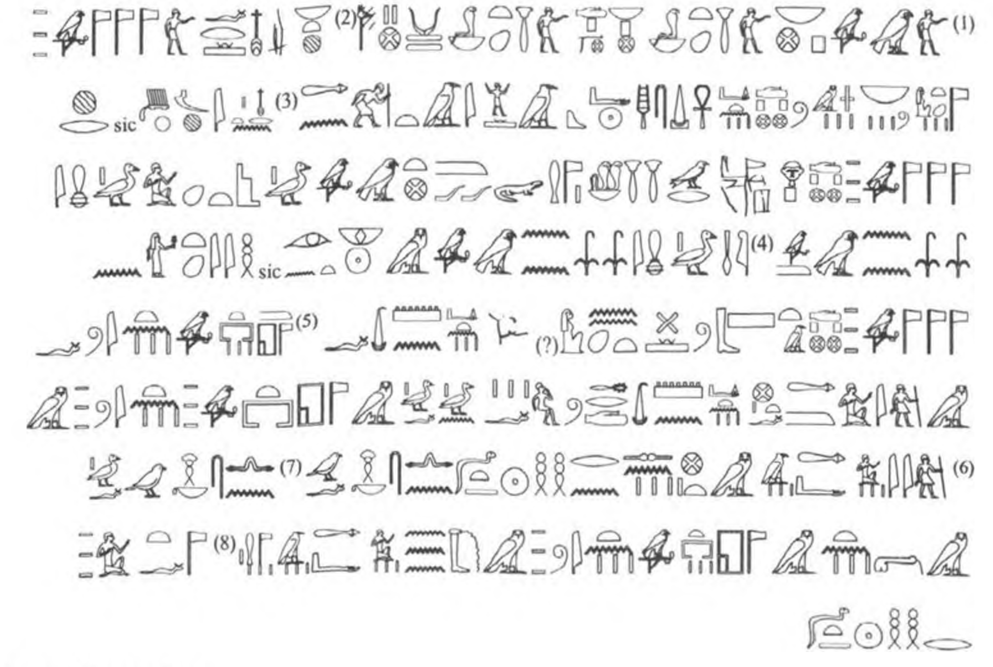
[18] Zu dieser Erscheinungsform der Göttin siehe J. Vandier, *Ouadjet et l'Horus léontocéphale de Bouto*, in: *Fondation Eugène Piot. Monuments et mémoires publiés par l'Académie des Inscriptions et Belles-Lettres* 55, Paris 1967, S. 7–75 sowie C. Coche, in: *RdE* 22, 1970, S. 51–62; für entsprechende Funde aus Buto S. Bedier, *Zwei Türblöcke des Königs Psammetich II. aus Buto*, in: C.J. Eyre (ed.), *Proceedings of the Seventh International Congress of Egyptologists, Cambridge, 3–9 September 1995, OLA* 82, Leuven 1998, S. 127, Anm. 31.

Hieroglyphische Transkription[19]


(1)
(2)
sic
(3)
(4)
sic
(5)
(?)
(6)
(7)
(8)

Transliteration

(1) *i Ḥr nb-P i Wꜣḏt nb(t)-P-Dp*(a) *i Wꜣḏt wp(t)-tꜣwy*(b) *wsr(t)*(c) (2) *nb(t)-tḫ*(d) *nfr(t) i nṯrw nṯrwt nbw imyw P Dp di.ṯn ꜥnḫ wḏꜣ snb ꜥḥꜥw ḳꜣ iꜣ(w)t ꜥꜣ(t) n(t)* (3) *nfrt n imꜣḫ(w)*(e) *ḫr nṯrw P Dp ḥry-P (…)*(f) *wr-Wꜣḏty ḥm-nṯr Sbk-m-ꜥbwyt Ḥr-sꜣ-St sꜣ mi nn n Ḥr-m-* (4) *mꜣꜥ-ḫrw sꜣ mi nn n Ḥr-m-ḥb ir{t}*(g) *n (i)ḥyt*(h) *n(t) nṯrw Dp P Tꜣ-(nt-)špw-n-Nt (?) (…)*(i) *di.ṯn mn.f* (5) *m ḥwwt-nṯr.ṯn iw.f m sr ꜥꜣ m niwt.f di.ṯn mn ẖrdw.f sꜣ n sꜣ.f m ḥwwt-nṯr.ṯn iw.w m* (6) *srw*(j) *ꜥꜣw m niwt.sn r nḥḥ ḏt nn sk.f* (7) *nn sk sꜣ.f m-bꜣḥ.ṯn m ḥwwt-nṯr.ṯn iw.w m wꜥbw ꜥꜣw ḥmw-nṯr*(k) (8) *itw-nṯr r (n)ḥḥ ḏt*

Anmerkungen

(a) Zur Schreibung von *Dp* mit der Zunge (Gardiner, *EG*, sign-list, F 20) vgl. *Wb* V, S. 443.

(b) Während die beiden kleinen Striche nach *tꜣwy* einigermaßen plausibel als Dualstriche angesehen werden können, ist das nachfolgende Determinativ des Stadt(?)zeichens (mit weit nach rechts abgerutschter Ritzlinie) merkwürdig. Im Gegensatz zum sonstigen Vorkommen auf der Stele (Zeile 1–6 jeweils bei den Stadtnamen *P*, *Dp* und *ꜥbwyt* sowie bei *niwt*) besteht die Binnenzeichnung nicht aus zwei, sondern aus vier Strichen[20]. Auch das *wp(t)-tꜣwy* auf der von C. Coche, in: *RdE* 22, 1970, S. 51–62 publizierten Wadjet-Statue aus einer Privatsammlung zeigt eine sonderbare Schreibung: Hier (*op.*

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[19] Der besseren Lesbarkeit halber sind die gedrängten Zeichenfolgen (siehe oben) hier 'entzerrt' wiedergegeben und entsprechen daher nicht genau der originalen Anordnung.

[20] Die Stadtzeichen bei *P* und *Dp* in der Beischrift der Wadjet im Giebelfeld weisen keine Binnenzeichnung auf, doch dies ist sicherlich auf die geringe Größe der Zeichen zurückzuführen.

cit., S. 56, vgl. Abb. 3) ist ein rundes Zeichen mit Kreuzschraffur in das Gehörn *wp* 'eingelassen', was von COCHE als Verwechslung von 𓊪 (als phonetisches Komplement zu *wp*) und 𓐍 erklärt wird.

(c) Unklar wegen Vertiefung bzw. Ausbruch im Stein. Das Zeichen entspricht mit den beiden kleinen Strichen oben am ehesten GARDINER, *EG*, sign-list, F 12, vgl. VERHOEVEN, *Späthieratische Buchschrift*, S. 128f.

(d) *ḫ* hier im Unterschied zu Zeile 3 (bei *im3ḫ*[*w*] *ḫr*) mit zwei senkrechten parallelen Strichen im Kreis (vgl. die teils variierenden Schreibungen von *ḫ* bei VERHOEVEN, *Späthieratische Buchschrift*, S. 208f. sowie S. 270 zu ähnlichen bzw. identischen hieratischen Formen anderer Hieroglyphen). – Bei dem schmalen länglichen Zeichen handelt es sich um das Determinativ des Lotes oder 'Züngleins' der Waage *tḫ*, vgl. die in *Wb* V, S. 323.7–12 aufgeführten Formen sowie unten Anm. (b) zur Übersetzung.

(e) Das runde Zeichen zwischen 𓄪 und 𓊹𓊹𓊹 dürfte ein fehlerhaft hinzugefügtes *ḫ* sein, vielleicht stand dem Schreiber dabei die Kurzform 𓄪𓐍 für *im3ḫw* (*Wb* I, S. 82) vor Augen (vgl. auch die Schreibung mit eingeschobenem *t* bei P. DER MANUELIAN, *Living in the Past. Studies in Archaism of the Egyptian Twenty-sixth Dynasty*, London – New York 1994, S. 76). Weniger wahrscheinlich ist die Möglichkeit, es als Bestandteil von *nṯrw* anzusehen, da die entsprechenden Hieratogramme (vgl. VERHOEVEN, *Späthieratische Buchschrift*, S. 176f.) eher einen Punkt oder Strich weiter rechts aufweisen, der im übrigen auch nicht bei den Schreibungen von *nṯrw* in Zeile 2 und 4 zu erkennen ist.

(f) Die Zeichenfolge zwischen *ḥry-P* und *wr-w3ḏty* bleibt trotz identifizierbarer Einzelzeichen (𓏏?, 𓊪, 𓊹, ◺ oder 𓉗?, ▭?) unverständlich. Bei dem schrägen Strich am Schluß könnte es sich um eine bedeutungslose Füllung einer sonst freien Fläche (*horror vacui*) handeln, vgl. C. COCHE, in: *RdE* 22, 1970, S. 55 mit Abb. 2 für einen ähnlichen Fall.

(g) Zum überflüssigen *t* bei *ir*{*t*} *n* in der Saitenzeit vgl. P. DER MANUELIAN, *op. cit.* (Anm. [e]), S. 75 und K. JANSEN-WINKELN, *Sentenzen und Maximen in den Privatinschriften der ägyptischen Spätzeit*, *ACHET – Schriften zur Ägyptologie* 1, Berlin 1999, S. 121 (Anm. zu A.2.a.5/7/16).

(h) *ḫ* anders als in Zeile 6 und 8 (bei *nḥḥ*) mit zwei parallel verlaufenden vertikalen Strichen (doppelte vertikale Linienführung auch bei *nṯr* in *ḥm-nṯr*, Zeile 3, und in *ḥwwt-nṯr*, Zeile 7, sowie beim Semogrammstrich bei *niwt*, Zeile 6). Für die Schreibung von *iḥyt* ohne *i* am Anfang vgl. beispielsweise R. EL-SAYED, *Documents relatifs à Saïs et ses divinités*, in: *BdE* 69, Le Caire 1975, S. 267.

(i) Bei dem Zeichen nach 𓎛 dürfte es sich trotz doppelter Linienführung (vgl. vorige Anm.) um ✕ (VERHOEVEN, *Späthieratische Buchschrift*, S. 206f.) und nicht um 𓐍 (VERHOEVEN, *Späthieratische Buchschrift*, S. 208f.) handeln, vgl. die Schreibungen bei RANKE, *PN* I, S. 325.17ff., 363.5, letzteres auch als mögliche Parallele zur Schreibung mit 𓎛 und Buchrolle. Die Zeichenfolge offenbar im Anschluß (!) an das Determinativ der sitzenden Frau bleibt mir unverständlich, *m3ʿ ḫrw* scheint ausgeschlossen (vgl. VERHOEVEN, *Späthieratische Buchschrift*, S. 222f.). Zur Namensform siehe oben Anm. (a) zur Transkription der Beischrift im Giebelfeld, für einen weiteren Beleg auf einem Skarabäus der 26. Dynastie C. REGNER, *Skarabäen und Skaraboide, Bonner Sammlung von Aegyptiaca* 1, Wiesbaden 1995, S. 89f. mit Taf. 24 (BoS Inv.-Nr. 1100).

(j) Zur in der Spätzeit üblichen Schreibung mit zwei Schilfblättern vgl. P. DER MANUELIAN, *op. cit.* (Anm. [e]), S. 70 mit Hinweis auf *Wb* IV, S. 188.

(k) Die Pluralstriche scheinbar am Ende der 'Subzeile' gehören zu *ḥmw-nṯr*.

Übersetzung

(1) „O Horus, Herr von Pe; o Wadjet, Herrin von Pe und Dep; o Wadjet, Richterin der beiden Länder[(a)], Mächtige, (2) Herrin des Lotes (der Waage)[(b)], Schöne; o alle Götter und Göttinnen, die sich in Pe und Dep befinden[(c)]!

Möget Ihr geben Leben, Heil und Gesundheit, eine hohe Lebenszeit und ein großes Alter in (wörtl.: der) (3) Vollkommenheit dem Ehrwürdigen bei den Göttern von Pe und Dep, dem *ḥry-P*, (…)(d), *wr-wꜣḏty* und Gottesdiener des Sobek in *ꜥbwyt*(c) Harsiese, Sohn des Mannes mit gleichen Titeln(f) *Ḥr-m-* (4) *mꜣꜥ-ḫrw*, (dieser wiederum) Sohn des Mannes mit gleichen Titeln *Ḥr-m-ḥb*, geboren von der Musikantin der Götter von Pe und Dep *Tꜣ-(nt-)špw-n-Nt* (?) (…)!

Möget Ihr veranlassen, daß er andauert (5) in Euren Gotteshäusern, indem er ein großer Beamter in seiner Stadt ist! Möget Ihr veranlassen, daß (auch) seine Kinder und (noch) der Sohn seines Sohnes andauern in Euren Gotteshäusern, indem sie (6) große Beamte in ihrer Stadt sind bis in alle Ewigkeit! Nicht soll er vergehen, (7) (und) nicht soll sein Sohn vergehen vor Euch in Euren Gotteshäusern, indem sie große Wab-Priester, Gottesdiener und (8) Gottesväter sind bis in alle Ewigkeit!"

Anmerkungen

(a) *wpt-tꜣwy* als Epitheton der Wadjet, das die Göttin insbesondere mit ihren Kultorten Buto und Imet verbindet, ist gut und auch für die Saitenzeit belegt, vgl. die Zusammenstellung von C. COCHE, in: *RdE* 22, 1970, S. 59–61 sowie EAD., in: *BIFAO* 74, 1974, S. 118f., Anm. 4. Umstritten ist dagegen die Bedeutung der Bezeichnung, die vornehmlich vom Verständnis des *wp* abhängt: „öffnen", „richten" oder „abgrenzen"[21]. Das nachfolgende Beiwort der Wadjet „Herrin des Lotes (der Waage)" (siehe folgende Anmerkung) ermöglicht hier[22] eine definitive Klärung *pro* „richten", ein Aspekt der Göttin, der auch von L. DELVAUX, in: W. CLARYSSE/A. SCHOORS/H. WILLEMS (eds.), *Egyptian Religion – The Last Thousand Years, Part I. Studies Dedicated to the Memory of Jan Quaegebeur*, *OLA* 84, Leuven 1998, S. 565 mit Anm. 66 betont wird, der diese Erscheinungsform der Wadjet mit dem Orakel von Buto und einer königlichen Legitimation in der Saitenzeit in Verbindung bringt.

(b) Aufgrund der Determinierung (siehe oben Anm. [d] zur Transkription) kann es sich hier nicht um *nbt-tẖ* „Herrin der Trunkenheit" handeln (*Wb* V, S. 324.13), zumal dieser, üblicherweise der Hathor vorbehaltene Beiname für Wadjet nicht belegt zu sein scheint. *nbt-tẖ* „Herrin des Lotes (der Waage)" ist zwar bislang ebenfalls weder für Wadjet noch für eine andere Göttin belegt, doch lassen Schreibung und vor allem die Verbindung zum vorangegangenen *wp(t)-tꜣwy* m.E. keine andere Deutung zu. Wadjet ist demnach hier in einer 'juristischen' Funktion genannt, vgl. *nb-tẖ* „Herr des Lotes" als Bezeichnung des Thoth bzw. des Haroeris in griechisch-römischer Zeit bei G. MÖLLER, *Die beiden Totenpapyrus Rhind des Museums zu Edinburg*, Leipzig 1913 (Nachdruck Milano 1977), S. 36 mit Taf. VII (pRhind I, VII, 9) und A. GUTBUB, *Kôm Ombo* I, Le Caire 1995, S. 193 (Szene 140, Z. 15); für die Verbindung von Waage und Recht siehe den Überblick bei E. MARTIN-PARDEY, in: *LÄ* VI, Sp. 1084 mit weiterführenden Literaturangaben. Das vorstehende *wp(t)-tꜣwy* dürfte daher hier (*contra* C. COCHE, in: *RdE* 22, 1970, S. 57) die Bedeutung „die die beiden Länder schlichtet/richtet" haben.

(c) Diese Form des butischen Götterkollektivs erscheint auch in einem Stundenbuch aus griechisch-römischer Zeit: R.O. FAULKNER, *An Ancient Egyptian Book of Hours (Pap. Brit. Mus. 10569)*, Oxford

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[21] Vgl. die Diskussion bei C. COCHE, in: *RdE* 22, 1970, S. 56–58 sowie P. VERNUS, *Athribis. Textes et documents relatifs à la géographie, aux cultes, et à l'histoire d'une ville du Delta égyptien à l'époque pharaonique*, *BdE* 74, Le Caire 1978, S. 400, Anm. 4; H.-W. FISCHER-ELFERT, in: *LÄ* VI, Sp. 907 mit Anm. 16 (Sp. 909–910); P.P. KOEMOTH, *Délimiter le Double Pays en tant que territoire dévolu à Maât*, in: *BSEG* 19, 1995, S. 13–23, bes. S. 14–16 und zuletzt L. DELVAUX, *Les bronzes de Saïs, les dieux de Bouto et les rois des marais*, in: W. CLARYSSE/A. SCHOORS/H. WILLEMS (eds.), *Egyptian Religion – The Last Thousand Years, Part I. Studies Dedicated to the Memory of Jan Quaegebeur*, *OLA* 84, Leuven 1998, S. 565.

[22] Wobei nicht ausgeschlossen ist, daß das Epitheton an anderen Stellen anders zu verstehen ist, vgl. P. VERNUS, *op. cit.* (Anm. 21), S. 400, Anm. 4.

1958, S. 15 (Kol. 10, Z. 9). Vgl. zudem Otto, *Mundöffnungsritual* I, S. 157f. (Szene 59C, Text 7), wo in einer Götterauflistung nacheinander die *nṯrw nṯrwt nbw imyw P* und die *nṯrw nṯrwt nbw imyw Dp* genannt werden.

(d) Bei der mir unverständlichen Gruppe, die von zwei Priestertiteln flankiert wird, dürfte es sich mit hoher Wahrscheinlichkeit um einen dritten handeln, der, da er in der Beischrift im Giebelfeld nicht vorkommt, möglicherweise weniger bedeutend war oder – wie der ebenfalls dort nicht genannte Titel *ḥm-nṯr Sbk-m-ꜥbwyt* – keinen direkten Bezug zu Buto und seinen Göttern aufweist. In Betracht käme daher auch ein Titel, der mit der Stadt Sais verbunden ist[23].

(e) Ein Kultort des Sobek *ꜥbwyt* im Delta ist m.W. bislang nicht belegt. Trotz identischer Schreibung ist es zweifelhaft, ob der bei Gauthier, *DG* I, S. 141 aufgeführte Ortsname unsicherer Lokalisierung „la ville des deux cornes" in einer Inschrift des Edfu-Tempels (*Edfou* II, S. 107) hiermit in Verbindung zu bringen ist. Für einen Priester, der neben *ḥm Ḥr wr-wꜣḏty* und *ḥm-nṯr Wꜣḏt wp(t)-tꜣwy* auch *ḥm-nṯr Sbk-kꜣ-Rꜥ* war, vgl. C. Coche, in: *RdE* 22, 1970, S. 59 (5.).

(f) Vgl. *Wb* III, S. 408.9.

Auch wenn die Inschrift eher schlichten Inhalts ist und die Stele nicht durch einen hohen Grad an Qualität besticht, vermittelt dieses kleine Denkmal doch aufschlußreiche Informationen in Ergänzung zu dem, was bislang an Funden der 26. Dynastie aus Buto bekannt war[24]: Noch vor dem Tempelbau vermutlich unter Amasis existierten mehrere Kultstätten, die Horus, dem Herrn von Pe, der löwenköpfigen Wadjet, Herrin von Pe und Dep, und wahrscheinlich noch weiteren Gottheiten geweiht waren. Hier verrichteten mindestens drei Generationen einer Priesterfamilie ihren Dienst als *ḥry-P* und *wr-wꜣḏty* (sowie in einer weiteren, hier unklar bleibenden Funktion), zusätzlich als Gottesdiener des Sobek in *ꜥbwyt*, einem wohl nahe gelegenen Kultort. Auch die Mutter des Stifters stand als Musikantin der Götter von Pe und Dep mit dem lokalen Kult in Verbindung.

Bemerkenswert ist ferner die Reihung der Epitheta der Wadjet, die diese Göttin gegenüber Horus weit konkreter in ihren Erscheinungen bzw. Funktionen benennen, u.a. in ihrem richterlichen Aspekt, der neben *wpt-tꜣwy* durch den hier erstmals für eine Göttin belegten Beinamen *nbt-tḫ* „Herrin des Lotes (der Waage)" ausgedrückt wird und möglicherweise auf einen besonderen Stellenwert Butos hinsichtlich der königlichen Legitimation in der Saitenzeit zurückzuführen ist[25].

Schließlich ist auf den ungewöhnlichen Fundkontext zurückzukommen, der die Aussagen des Textes in einem ganz speziellen Licht erscheinen läßt, wofür es m.W. bislang keinerlei Parallele gibt: Irgendwann kurz vor oder während der ersten Fundamentierungsarbeiten zum Bau des mutmaßlichen Wadjet-Tempels unter Amasis faßte Harsiese als „großer Beamter seiner Stadt" den Entschluß, ein privates *Exvoto* quasi als persönliche Gründungsbeigabe[26] in den 'Hohen Sand' seines zukünftigen Arbeitsplatzes niederzulegen, um auf diese Weise sein Bittgesuch an die Götter von Buto um ein schönes, langes Leben und das Fortbestehen seiner Ämter sowie diejenigen seiner Nachfahren in ihren Kultstätten für alle Zeiten wirksam zu machen. Die Stelle war gut gewählt: Geschützt vom reinen Sand, blieb Harsieses bescheidenes Zeugnis seiner persönlichen Frömmigkeit für mehr als zweieinhalb Jahrtausende verborgen, bis in eine Zeit, in der vom einst prächtigen Tempelbau, von dem uns Herodot eine recht detaillierte Beschreibung hinterlassen hat[27], schon lange kaum noch etwas übriggeblieben war.

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[23] Zur engen Verbindung der beiden Städte in saitischer Zeit auch in bezug auf religiöse Ämter vgl. D.B. Redford, *Notes on the History of Ancient Buto*, in: *BES* 5, 1983, S. 85–89; S. Bedier, *op. cit.* (Anm. 18), S. 125; L. Delvaux, *op. cit.* (Anm. 21), S. 551–568, bes. S. 561.

[24] Vgl. die Übersicht bei D.B. Redford, in: *BES* 5, 1983, S. 85–89 sowie S. Bedier, *op. cit.* (Anm. 18), S. 125 und zuletzt ead., *Die Statue Nr. 586 aus Buto*, in: *Discussions in Egyptology* 44, Oxford 1999, S. 19–35. Zu saitenzeitlichen Bebauungsresten südwestlich von *Kôm* A siehe jetzt U. Hartung, in: *MDAIK* 59, 2003, S. 209–219.

[25] Vgl. Anm. (a) zur Übersetzung des Haupttextes.

[26] Zu Gründungs- und Votivgaben siehe allg. B. Letellier, in: *LÄ* II, Sp. 906–912; J.M. Weinstein, *Foundation Deposits in Ancient Egypt*, Ann Arbor/London 1978 (Ph.D. University of Pennsylvania 1973), bes. S. 288–350 zur Spätzeit; H. Brunner, in: *LÄ* VI, Sp. 1077–1081. Vgl. auch R.S. Bianchi, *Ex-Votos of Dynasty XXVI*, in: *MDAIK* 35, 1979, S. 15–22.

Abstract

Publication of a small 26th Dynasty limestone stela found in the temple precinct of Buto/Tell el-Fara'in in 1997 (already announced in *MDAIK* 56, 2000, p. 167, Taf. 16c). According to the archaeological context the stela is to be regarded as a kind of private votive offering deposited by a priest Harsiese within the so-called 'high sand' of the Late Period temple presumably built by Amasis. Due to the occurrence of priestly titles and divine epithets in the hieratic inscription, this remarkable testimony of personal piety contributes to our knowledge of Buto's religious significance during the Saite period.

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[27] II, 155–156. Vgl. auch D.B. Redford, in: *BES* 5, 1983, S. 86 und D. Arnold, *Temples of the Last Pharaohs*, New York/Oxford 1999, S. 84 sowie G. Burkard, in: *ZÄS* 121, 1994, S. 95.

Some Thoughts on Chalcolithic and Early Bronze Age Flint Scrapers in Egypt

By THOMAS HIKADE[1]

Introduction

A great amount of stone tools can be classified as *ad hoc* or expedient tools. An instant demand causes the manufacture of the tool with the main aim of achieving a sharp working edge. The morphology of these tools varies a great deal and no standardisation follows. On the other side the form and shape of stone implements can be seen as static entities that are the result of a clear and distinct intention by flint knappers. Hence one can assume that an assemblage reflects discrete types that can be sorted and analysed on morphological definitions. On this basis it seems plausible to separate types according to function and even to define cultural diversities. However, it is obvious that stone tools change their shape and size during their use-life due to reuse, resharpening or rejuvenation in such a way that the final form of the discarded artefact may lack any resemblance to the original. This means that the object with which the archaeologist deals represents only the last moment in the continuum of a reduction sequence (*chaîne opératoire*) and the original shape and type of a stone implement may well be very different from that which the flint knapper once intended[2]. In a time when stone tools were manufactured by specialised workmen and then traded or distributed to potential users the final discarded implement may well have been affected by the skills of the user. Therefore the archaeologist must be cautious not to define too many types based on morphology alone.

The use of stone tools can be seen in a lot of handiwork. Whether one skins, butchers or shears an animal, or removes the bark from a branch, a scraping movement is involved often leaving perpendicular retouches on the artefact. Work with a chipped stone tool, especially when done with a lot of muscular effort, results in use-wear appearing on the artefact[3]. One of the easiest to see with the naked eye is the so-called sickle sheen on harvesting tools, which is caused by the friction of the tool against, for example, wheat or barley. Other use-wear such as parallel scratches may come from sawing. The result of use-wear in the long run, however, is more or less always the same. The tool loses its sharpness and effectiveness. In order to have the tool at hand for further use it must be resharpened.

However, even when in use for several decades a flint implement sometimes could retain enough of its original characteristics to attribute it to its original time of manufacturing. One excellent example for this is a flint knife from the tomb of Khasekhemuy at Abydos[4]. At 72 cm this is the largest complete flint knife found in Egypt so far. A handle fragment with similar dimensions proves that there were at least two such big knives. They were deposited during the funeral of the king at the end of the 2nd Dynasty. The shape remains distinctive but resharpening had made the blade narrower over time. As indicated by this shape as well as the very worn hook handle the knives were most likely manufactured in the 1st Dynasty and hence were probably in use for more than 100 years. This example shows that stone tools apart from instant use might have a very long service life when situated in a special context.

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[1] I would like to thank STEPHEN BOURKE (University of Sydney) and JANE ROY (Macquarie University/Sydney) for reading earlier drafts of the paper and for useful and encouraging comments.

[2] For a discussion of this topic exemplified on Middle Palaeolithic scrapers see H.L. DIBBLE, in: *Journal of Archaeological Method and Theory* 2.4, 1995, pp. 300–368. Since the following paper is a first attempt at sorting Egyptian scrapers of the 4th and 3rd millennium BC a similar study is beyond this presentation.

[3] J. SHEA, in: *Evolutionary Anthropology* 1(4), 1992, pp. 143–150.

Lithic Specialisation and Egyptian State Formation

During the 4th millennium the process of state formation began in Egypt, resulting around 3100 BC in one of the most prosperous and organised nations of that time. It is not the intention of this paper to reassess the extremely complex process of state formation. However, it should be noted that this process and the subsequent centralisation of government also saw changes in the procurement of raw material and in the manufacture and distribution of stone tools.

Apart from the development in the fields of politics and economics further changes came to the day-to-day life of the Nile Valley dwellers. It was not so much that their subsistence economy altered dramatically but that their tool kits and household items underwent significant improvement and development. Around the time of the unification many commodities began to be produced on a quasi industrial level. In earlier times private households had manufactured their own pots and pans. Apart from this local production, with the increasing presence of an administrative apparatus, the production process for some goods such as mass-produced wine jars, stone vessels and high-quality stone tools gradually fell now under the control of government production centres.

With this enhanced control over raw material resources, manufacturing and trade, flint tools became more and more standardised and special flint workshops met the demands of royal estates, temples and other state institutions. During the late Predynastic such specialised workshops were based next to the residence of the rulers at Hierakonpolis, Naqada and Abydos. At Abydos, for instance, a dense light to mid-brown flint with pinkish stripes was the most preferred material and most likely mined from the local limestone formations[5]. Distinct tool types such as the oval, regular, bitruncated blades, often nicknamed 'razor blades', were made of this flint. However, many of the so-called 'ripple-flaked' knives also consist of this material. The most well known knife of this type is probably the Gebel el-Arak knife[6], which is believed to have come from the Abydos region. It is most likely that these tool types were produced at workshops at Abydos and from there distributed and traded throughout Egypt.

After the move of the residence to Memphis a new caramel coloured flint, often with white bands, became widespread. Most likely it was mined near the new capital where the royal workshops were now based. For the regional centres in Upper Egypt this shift to the north implied a greater distance to attain top quality flint and skills. This had to be compensated by either once again using more and more local raw material of poorer quality or becoming more dependent on deliveries from the central workshops in the north.

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[4] T. HIKADE, in: *MDAIK* 53, 1997, pp. 85–89.

[5] T. HIKADE, in: *Nekhen News* 12, 2000, pp. 15, 18–19.

[6] C. ZIEGLER, *The Louvre. Egyptian Antiquities*, Paris 1990, p. 12.

The Role and Function of Scrapers in Egypt

Regarding North African stone tool assemblages a typology of scrapers was presented some time ago by J. Tixier[7]. But it is only in the last 20–30 years that clearly stratified Chalcolithic and Early Bronze Age material from sites such as Buto, Tell Ibrahim Awad, Hierakonpolis and Elephantine has been excavated in Egypt. This now provides a new and solid basis to classify, arrange and investigate the context of lithic stone implements. In this field the work of D. Holmes working with material from Middle and Upper Egypt has already given a broad outline on various tool types and debitage forms of the 4th millennium BC[8].

In this context we would like to concentrate on one tool category, the scraper. Besides blades that were changed into tools by retouching or denticulation of the lateral edges in various ways, the most common tool types in Egypt are sidescrapers, endscrapers, burins, axes, bifacial knives and arrowheads. A simplified chart of the distribution of tools from Elephantine, opposite the modern town of Aswan in southern Egypt, for the 3rd millennium BC provides the following figures based on the analysis of approximately 5000 pieces of which one quarter can be classified as tools[9].

Type	percentage
Dorsal retouched blades/flakes	14.0%
Ventral retouched blades/flakes	4.4%
Dorsal and ventral retouched blades/flakes	6.1%
Denticulated blades/flakes	9.0%
Segmented blades	6.7%
Backed blades/flakes	1.3%
Notched blades	3.8%
Borers	4.5%
Burins	0.9%
Arrowheads	0.1%
Bifacial tools on flakes	0.1%
Bifacial core tools	11.0%
Endscrapers	3.6%
Sidescrapers	10.5%
Rectangular, bitruncated blades	24.0%

Tab. 1: Tool classes at Elephantine from the late 1st–6th Dynasties

According to this chart scrapers account for almost 15% of the tools. Often the scrapers were made on selected raw material not available in the region and imported as a finished product to the island. In addition to the figure from Elephantine another comparative chart further underlines the importance of the scraper for daily use in Ancient Egypt. The numbers were extracted from studies carried out at Giza[10], ᶜAyn Asil[11], Tell Ibrahim Awad[12], and Helwan[13].

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[7] J. Tixier, *Typologie de l'épipaléolithique du Maghreb*, Paris 1963.

[8] For example D. Holmes, *The Predynastic Lithic Industries of Upper Egypt, A Comparative Study of the Lithic Traditions of Badari, Nagada, and Hierakonpolis*, *BAR Intern. Series* 469, Oxford 1989, pp. 395–458.

[9] T. Hikade, in: *MDAIK* 58, 2002, pp. 305–322.

	Helwan	Elephantine	Giza	ᶜAyn Asil	Tell Ibrahim Awad
Retouched blades/flakes	54.1%	24.5%	12.9%	7.3%	no nos.
Segmented blades (sickle blades)	6.1%	6.7%	11.1%	6.1%	33.1%
Bifacial knives and core tools	1.2%	11.1%	22.3%	1.1%	3.0%
Sidescrapers	16.9%	10.5%	15.6%	51.0%	0.0%
Endscrapers	3.3%	3.6%	4.8%	no nos.	1.2%

Tab. 2: Comparative scraper use

With regard to sidescrapers, Tell Ibrahim Awad and ᶜAyn Asil seem to be statistical anomalies. However, recent initial studies by the author at Tell Ibrahim Awad revealed the presence of sidescrapers as making up approximately 5% of the assemblage. For ᶜAyn Asil, a settlement located in the Dakhla Oasis, the figure seems relatively high and is possibly due to a specialised industry there. At the other sites scrapers account for 15–20% emphasising the importance of the implement and justify the undertaking of structuring scraper types in order to find and define type fossils.

In Ancient Egypt scrapers occurred on flakes, blades, bladelets and cores. The working edge can have a convex or concave shape. When retouched along the longer lateral sides the tool can be classified as a sidescraper with either a monolateral or a bilateral retouching, retouching along all edges or alternating in various patterns. When retouched at the distal or proximal end we call it an endscraper. However, the latter of course raises the problem that tools could have been retouched at the ends and still the working edge was along the lateral sides.

Moreover, defining a type with a name that implies knowledge of its actual function can be problematic as well. Since there is the chance that morphologically similar forms did serve different purposes, there remains the risk of classifying them under the same label despite dissimilar use. Nevertheless, when the differences in shape and technique between several types of scrapers are clearly distinct it is justified to draw a line between the types and to assume that they also served various needs. In the case of Egypt it is possible to define several very distinct types of standard scrapers, apart from the so-called *ad hoc* or expedient scrapers. We should remember that a great deal of the tools serving as scrapers were expedient tools, made on the spot when necessary and quickly discarded after use. Since they are likely to lack standardisation they will not be considered at this stage of this study. In Egypt this lack of standardisation can be seen for instance very well in the Old Kingdom to First Intermediate Period lithic industry in the Dakhla Oasis where scrapers occur on almost all forms on which a flake or blade can be worked[14]. Sometimes the broad variety of forms is also dependent on the availability of the raw material as exemplified by Elephantine, where the local industry is based on poor quality Nile pebbles that were harder to control during the production process and were often used for heavier tools[15].

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[10] K. Kromer, *Siedlungsfunde aus dem Frühen Alten Reich in Giseh. Österreichische Ausgrabungen 1971–1975*, Wien 1978, pp. 26–55.

[11] B. Midant-Reynes, *Le silex de ᶜAyn-Asil. Oasis de Dakhla-Balat, Documents de Fouilles de l'IFAO* 34, Cairo 1998.

[12] K. Schmidt, *Tell Ibrahim Awad: Preliminary Report on the Lithic Industries*, in: E.C.M. van den Brink (ed.), *The Nile Delta in Transition: 4th–3rd Millenium B.C.*, Tel Aviv 1992, pp. 79–96.

[13] T. Hikade, *Chipped-stone artefacts from Operation 1 and 2*, in: E.C. Köhler, *Helwan I – The Excavation Season 1997/98, SAGA* 24, Heidelberg, forthcoming.

In addition to the study of lithic assemblages of Ancient Egypt there is further excellent epigraphic evidence for the use and resharpening of flint tools. Several slaughtering scenes from the 5th and 6th Dynasties (ca 2480–2190 BC) show butchers carving up cattle while some stand next to the scene resharpening their knives. Just one example is the well-known tomb of Ptahhotep from Saqqara dated to the late 5th Dynasty[16].

Scraper Typology

The following typology is based on the author's own observations and research at the archaeological sites of Tell Ibrahim Awad, Maadi, Helwan, Abydos, Hierakonpolis and at the first cataract island of Elephantine (see Fig. 1). The material covers the period from Naqada II (ca 3600 BC) to the end of the Old Kingdom (ca 2200 BC). The types still rely strongly on the morphology of the objects, although there are probably considerable variations within each group. The list does not claim to be complete by any means and the problematic issue of the true function as scrapers remains but it should be considered as a starting point for further investigations.

'Tabular' and fan-shaped scraper (Fig. 2.1) Naqada I/II

This type of scraper is made on a large flake that was struck from flint nodules with an almost non-existent bending of the surface and therefore resembles a tabular flint. One source for the raw material of fan scrapers was the western Negev and the Sinai[17]. However, deposits with blanks and finished tools have also been located in the Jawf Basin in southeast Jordan[18] as well as in north-eastern Jordan[19]. The indication for tools made on true tabular flint is the existence of cortex on the dorsal as well as on the ventral aspect, and that does not apply to the 'tabular' or fan-shaped scrapers in Egypt, which only show cortex on the dorsal. This dorsal surface was left almost entirely covered by the natural cortex and only the edges were retouched. The ventral face mostly remained unretouched. The striking platform can be even but specimens with a faceted striking platform do occur. The bulbs of percussion can sometimes be quite pronounced. According to S.A. Rosen[20] the 'tabular' and fan-shaped scrapers were usually produced in a block-on-block technique, although some may have also been made using indirect percussion. Microwear analysis by M. McConaughy[21] yielded evidence that the EBA-scrapers were most

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[14] B. Midant-Reynes, *op. cit.*, pls. 18–24.

[15] T. Hikade, in: *MDAIK* 58, 2002, pp. 320–322.

[16] N. de Garis Davies, *The Mastaba of Ptahhetep and Akhethetep at Saqqareh* II, London 1901, pl. XXIII.

[17] S.A. Rosen, in: *BASOR* 249, 1983, pp. 79–86.

[18] L. Quintero/P.L. Wilke/G.O. Rollefson, in: *BASOR* 327, 2002, pp. 17–48.

[19] K. Schmidt, DAI Berlin, personal communication.

[20] S.A. Rosen, *Lithics after the Stone Age. A Handbook of Stone Tools from the Levant*, Walnut Creek, CA 1997, pp. 71–75.

[21] M. McConaughy, in: *BASOR* 240, 1980, pp. 53–58.

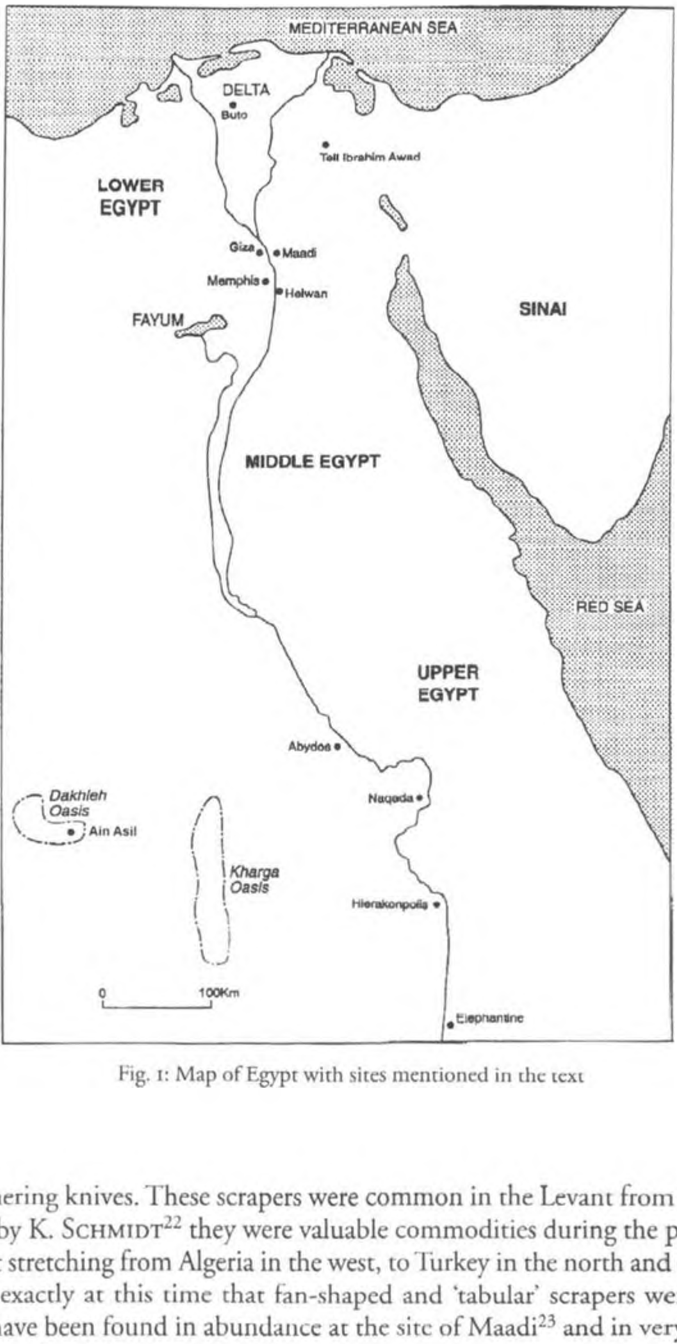

Fig. 1: Map of Egypt with sites mentioned in the text

likely used as butchering knives. These scrapers were common in the Levant from the PPNB till EB III. As recently shown by K. Schmidt[22] they were valuable commodities during the period of Early Bronze Age I with a market stretching from Algeria in the west, to Turkey in the north and the Arabian Peninsula in the east. It was exactly at this time that fan-shaped and 'tabular' scrapers were also imported into Egypt where they have been found in abundance at the site of Maadi[23] and in very small numbers from secondary contexts at the Delta site of Buto[24].

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[22] K. Schmidt, *Norsuntepe, Kleinfunde I. Die lithische Industrie*, *Archaeologica Euphratica* 1, Mainz 1996, pp. 85–100.

[23] Rizkana/Seeher, *Maadi* II, pls. 49–67.

[24] K. Schmidt, in: *MDAIK* 44, 1988, pp. 297–306.

Flat, oblong scraper (Fig. 2.2–6) Naqada II – 2nd Dynasty

This scraper type was made on a primary flake often of a light brown flint. It often has a very regular suboval shape with edge retouching on most parts of the margins. However, there are also scrapers of this type with a rather rectangular form such as the piece from Tell Ibrahim Awad (Fig. 2.6). When cortex remains it indicates, due to the chalky rind, that the flake was detached from a mined flint nodule. Use wear can be traced along all margins that were retouched and thus the type is a combination of a side/end scraper. Weights range from 35–50g.

Round scraper (Fig. 2.7–10) Naqada II – 6th Dynasty

This kind of scraper was sometimes made on very thick flakes or even half nodules. When made on a primary flake large parts of the cortex remain on the dorsal. Retouching goes right around the edges. Some scrapers have a straight basal edge with a broad striking platform remaining (Fig. 2.9). Since they still show the round working edge they are grouped under this type. Known from all over Egypt this standardised type was common from the Naqada II until the end of the Old Kingdom. Some of the specimens are relatively heavy with a weight of 70–80g. Characteristic specimens occur from a diameter of 11 cm down to small ones of less than 5 cm (*cf.* Fig. 2.10). Apart from the illustrated scrapers from Hierakonpolis and Maadi further good examples come from the Early Dynastic to Old Kingdom settlement of Abydos[25].

Triangular scraper (Fig. 2.11–14) 1st–4th Dynasty

This distinct type was common in Egypt from the 1st to the 4th Dynasty. Earlier pieces often show remains of natural cortex on the dorsal face. Edge retouching was done from the ventral to the dorsal and sometimes the ventral remained completely unretouched. However, from the very beginning of its appearance there are also fully bifacially retouched triangular scrapers. Depending on the size of the scraper the triangular form can be further classified into a lighter (< 40g) and into a group of heavier tools with weights of more than 50g. Some finds made on the island of Elephantine give evidence that this type was resharpened and hence lost its clear triangular shape (Figs. 2.12 and 2.14).

Scraper on bifacial thinning flake (Fig. 3.1–2) Naqada I/II – 6th Dynasty

This scraper was actually made on waste flakes. During the final stage of the manufacturing of bifacial tools very thin and broad flakes with a slightly curved cross section were removed from the surface of the artefact in order to reduce volume and give the tool its final shape. Due to the fact that the lateral bifacial ridge of the tool served as the striking platform this platform is faceted. In order to further alter the flakes into scrapers the detached flakes were often finely retouched on the distal end and sometimes also mono- or bilaterally. The objects themselves are very light in relation to overall size, ranging between 5–15g.

Convex sidescraper on flake/blade (Fig. 3.3–4) 1st–2nd Dynasty

Broad blades or long flakes were fashioned into a roughly crescent shape and retouched along all edges on the dorsal forming a convex working edge only on the left margin. The ventral aspect remained unretouched. Weights are in the range of 10–15g and so far this type seems to be limited to the Early Dynastic period.

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[25] W.M.F. Petrie, *Abydos* I, London 1902, pl. XXIII.

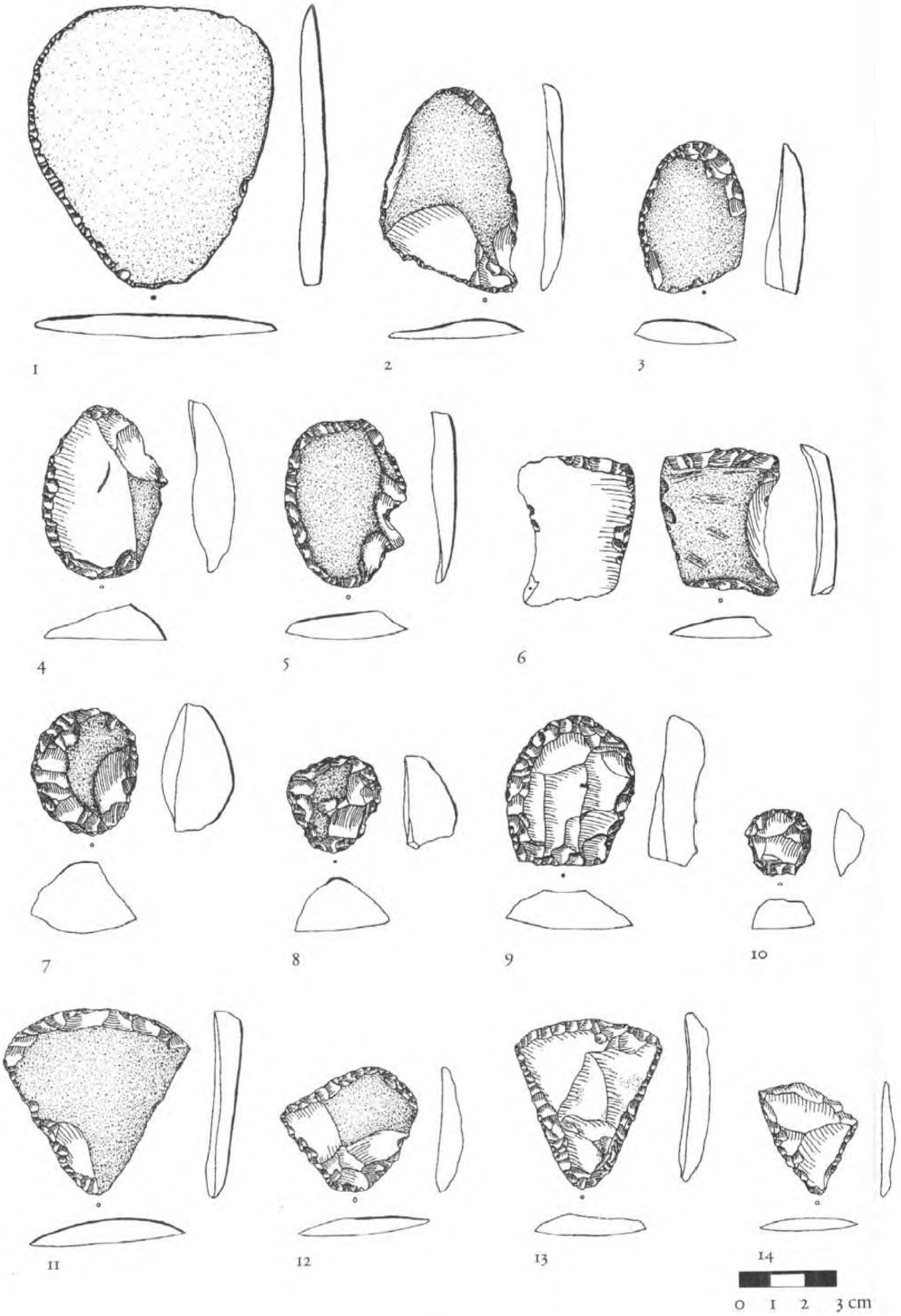

Fig. 2: 1 Fan-shaped scraper 2–6 Flat, oblong scrapers 7–10 Round scrapers 11–14 Triangular scrapers (scale c. 1:2)

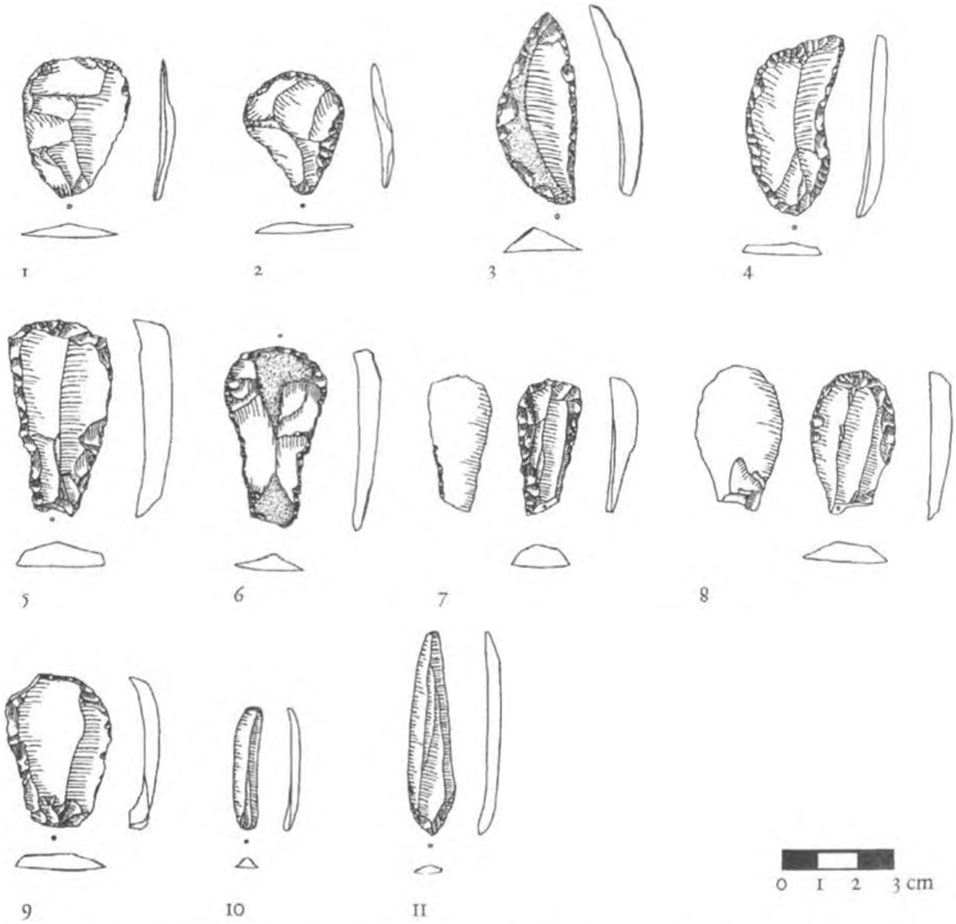

Fig. 3: 1–2 Scrapers on bifacial thinning flake 3–4 Convex sidescrapers 5–9 Endscraper 10 Microendscraper 11 Endscraper with pointed base (scale c. 1:2)

Endscraper on flake/blade (Fig. 3.5–9) Naqada I/II – 6th Dynasty

Scrapers of this basic type occurred often as *ad hoc* tools thus with a wide range of shape and size. However, there seems to be at least one standard form with a broader distal end (spoon-shaped) and a proximal end that was either truncated or deliberately snapped in order to fit the whole tool into an organic handle. Further evidence for this can be seen in the endscrapers that show lateral retouching near the proximal end (Fig. 3.7). Lighter specimens weigh around 5–10g with heavier tools in the range of 20–25g.

Microendscraper (Fig. 3.10) Naqada I/II

This type was made on bladelets with retouching occurring on the distal end often in connection with a fine retouching of the right margin. Defined once as a special tool type for the Chalcolithic of the Levant[26], microendscrapers are in fact also known in Egypt from Maadi in the north and as far as

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[26] I. Gilead, in: *Tel Aviv* 11.1, 1984, pp. 3–10.

Abydos[27] and Hierakonpolis[28] in the south. Although the function of the microendscrapers still remains unknown it seems possible that this implement was used in conjunction of the exploitation of aquatic resources[29].

Endscraper with pointed base (Fig. 3.11) 1st Dynasty

This type was most often made on a relatively regular blade of light brown flint with pink stripes or bands. It has fine retouching on the distal end in order to smooth the sharp edge and the proximal was given the form of a pointed base. In Egypt this scraper was manufactured only during the 1st Dynasty. Somewhat similar in shape to the microendscraper but often much longer this scraper might have served a similar purpose. It remains, however, uncertain whether the working edge was along the unretouched longer margins or whether, given the clearly defined basal end of this type, this part of the tool has to be favoured. Thus for the current study this type of tool is included here.

Summary

During the Neolithic contacts between settlements along the Nile were loose and hence flint assemblages were developed and designed according to local needs. Increasing contacts in the Chalcolithic set off the process of specialisation, standardisation and the exchange and trade of raw material from different regions. During the 4th millennium BC there was a variety of different forms and weight classes of side and endscrapers. They were very likely used for different yet still not precisely known purposes, ranging from scraping organic material as the most likely function, to cutting or butchering. According to their size and weight it is possible to separate heavier scrapers from lighter forms, thicker from thinner types, and also to pick out endscrapers that were, by evidence of their retouching pattern, most likely hafted onto organic handles.

With the political unification of Egypt state control increased resulting in royal workshops, the organised exploitation of flint resources and distribution throughout Egypt of raw material and standardised tools encompassing scrapers (Fig. 4). The most prominent examples of this developing mass production of the Early Dynastic Period were the triangular scrapers and the above mentioned regular, bitruncated oval and rectangular blades.

After the end of the Old Kingdom the craft of flint knapping as well as the demand for flint tools gradually declined. Flint workshops still existed, as one can see from a wallpainting at Beni Hassan Tomb 2[30] from the time of Sesostris I, which depicts the production of flint knives. Even as late as the New Kingdom flint was a common raw material. Probably even in Roman times people knapped silex *ad hoc*. However, the once so important craft of stone tool manufacturing no longer played the significant role in the Ancient Egyptian economy that it had for more than 1000 years from the late Naqada II period to the end of the Old Kingdom.

The morphological typology classifying scrapers according to their final shape set out above is therefore to be considered as a starting point and stimulus to future analysis of the lithic assemblages of Ancient Egypt.

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[27] T. Hikade, in: *MDAIK* 52, 1996, pp. 35–37.

[28] D. Holmes, *Chipped stone-working craftsmen, Hierakonpolis and the rise of civilization in Egypt*, in: R. Friedman/B. Adams (eds.), *The Followers of Horus. Studies dedicated to Michael Allen Hoffman*, Oxford 1992, pp. 37–44.

[29] J. Boessneck/A. von den Driesch, *Tierknochenfunde vom Tell Ibrahim Awad im östlichen Nildelta*, in: E.C.M. van den Brink (ed.), *The archaeology of the Nile Delta: problems and priorities*, Amsterdam 1988, pp. 117–122.

[30] P.E. Newberry, *Beni Hassan* I, London 1893, pl. XI.

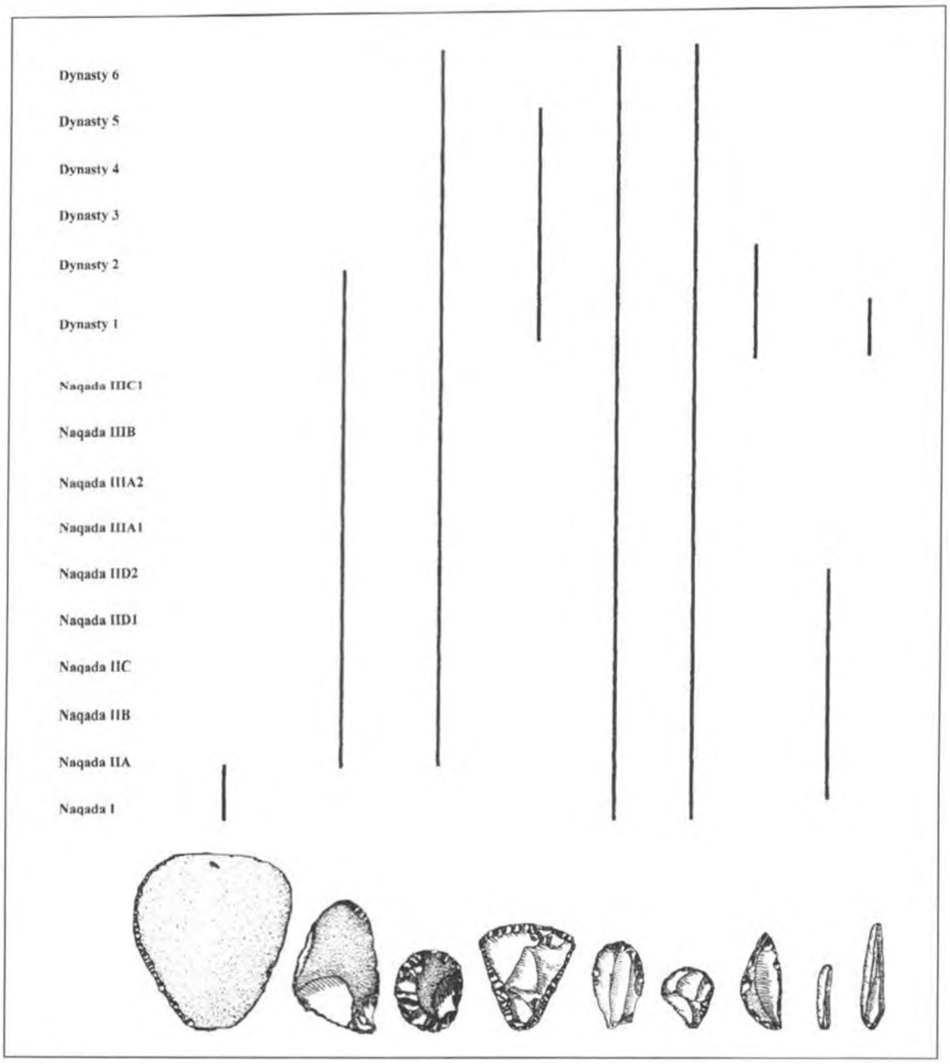

Fig. 4: Preliminary chronological overview of Chalcolithic and Early Bronze Age scrapers from Egypt

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Abstract

At the end of the 4th millennium BC Egypt witnessed the unification of the material culture followed by political state formation. The first was set off and influenced by increasing trade and exchange of knowledge, skills and objects along the Nile Valley that initially caused the expansion of territories of regional elites such as Hierakonpolis, Naqada, and Abydos and finally led to a unified kingdom and the foundation of the new capital at Memphis. Alongside this process large production centres and royal workshops for pottery, stone vessels and chipped stone tools were established. This development also influenced the acquirement and exploitation of flint sources, the manufacture of stone implements and the trading of raw material as well as finished products. One of the most important tools in the lithic tool kit was the scraper. Apart from expedient tools made *ad hoc* for immediate use there had already been a range of standardised scrapers in the 4th millennium BC. With the increasing governmental control of trade and raw material exploitation, variation was further reduced resulting in a standard mass production of a handful of types using a limited range of raw material resources. It seems very likely that the manufacture of certain tools using high quality flint was monopolised by royal workshops near Memphis. However, Egypt has abundant flint sources along the Nile Valley and so not everyone would have been directly affected by such a monopoly. Many persisted in the use of *ad hoc* implements. Nevertheless, where there was a local elite there was also the demand for products from the royal residence causing a division of the lithic assemblage studied by archaeologists into locally produced tools and internally imported ones.

This paper presents for the first time a morphological typology of scrapers for the period from the late Predynastic to the end of the Old Kingdom and sheds further light on how the above outlined political and social developments could affect stone tool production.

North Kharga Oasis Survey 2001–2002 Preliminary Report: Ain Gib and Qasr el-Sumayra

By Salima Ikram and Corinna Rossi
With contributions by Alan Clapham, Amanda Dunsmore, Richard Knisely-Marpole, Alan Rowe, Ilka Schacht and Nicholas Warner

(Tafeln 8–9)

The aim of the North Kharga Oasis Survey (NKOS) has been to identify, record and survey the major archaeological sites of the northern part of Kharga Oasis as little work has been carried out at sites other than Hibis Temple and the cemetery of Bagawat. The area under study during the first two years of survey (2001 and 2002) included the sites of Ain Gib, Qasr el-Sumayra, the different areas of Maghatta, Ezbet Muhammed Tuleib, Ain Ain Lebekha, Ain el-Tarakwa, Ain el-Dabashiya, Umm el-Dabadib and Ain Amur (Fig. 1). The majority of these sites appear to date to the late Roman period, but evidence of earlier periods, especially the Prehistoric, has also been recorded. Most of these sites are focussed around the standing remains of small forts or religious structures, and in some cases, both.

The first season took place in 2001 and was dedicated to the basic identification and exploration of these sites (apart from Ain Amur), and the drawing of sketch maps of these areas in order to establish the criteria for a more detailed future investigation. In 2002 NKOS started a systematic theodolite survey of the area moving from north to south. The areas explored included the sites of Ain Gib, Qasr el-Sumayra, Maghatta, and Muhammed Tuleib. This preliminary report contains the preliminary results of the 2001 and 2002 seasons, with the focus on the areas of Ain Gib, Qasr el-Sumayra, Settlement A at Maghatta, Muhammed Tuleib, and their associated remains, including various necropoleis.

Methodology

Because of the variety and distribution of the remains and the nature of the landscape, NKOS adopted various methods to survey the area and to record its features. Sites with the highest concentration of standing archaeological remains were identified, sketched, and surveyed by theodolite. Any remains close to the site were also surveyed into the map. Prominent architectural features were surveyed, drawn, and studied in detail. Human remains were examined on site, whereas ceramics and small finds were collected, studied, photographed, drawn when appropriate, and stored at the Kharga Inspectorate.

Walking surveys were carried out in the surroundings of the major sites, and the areas linking different sites, while long distance exploration was undertaken by car. A Global Positioning System (GPS) was used to record the position of distant features. Some points were recorded by both GPS and theodolite to check the correspondence between the two. The results were satisfactory, so that the same methods will be used in subsequent surveys. In 2001 NKOS also experimented with aerial photography using a digital camera attached to a kite. As the results were most encouraging, the method was used again in the 2002 season (see KNISELY-MARPOLE [R.K.-M.], p. 91 below), and was extremely helpful in identifying and mapping large areas during the course of the survey.

The Sites

The sites were explored from the north to the south starting at the fort of Ain Gib and continuing to the possible fort of Muhammed Tuleib. A brief synopsis of the work and discoveries at each site appear below.

Ain Gib and Qasr el-Sumayra

The northernmost major point of interest in Kharga is the fort of Ain Gib. The small mud-brick fort (see ROSSI [C.R.], pp. 76–79 below) surmounts a hill that commands a view of most of the north of the oasis (Taf. 8a). It is visible from the top of the escarpment, and was no doubt a major Roman lookout point. The sites of Ain Gib and Qasr el-Sumayra (Taf. 8b) taken together, may be regarded as a single complex of archaeological remains that covers an extensive, elongated area, at least 8.5 km long in a north-south direction and 3 km wide in an east-west direction. The only standing features of this site that are remarkable are the remains of two small forts, Qasr el-Gib and Qasr el-Sumayra, and a series of vertical shafts that indicate the existence of a subterranean aqueduct. However, a thorough exploration of their surroundings, carried out in 2001 and especially 2002, revealed the presence of significant archaeological remains. These include mud-brick structures, in various degrees of preservation, different types of tombs and burials, pottery, kilns, ovens, wells, subterranean aqueducts, and ancient field-systems. All the surface pottery associated with these remains appears to date to the Roman period, broadly speaking, to the 4th century AD (see DUNSMORE [A.D.], pp. 86–89 below).

The results of this investigation suggest that the area hosted a busy community that irrigated and cultivated the land, and probably controlled the northern access to the Kharga Oasis. The modern tarred road from Asyut to Kharga runs along an ancient desert track, the Darb el-Arbain (forty days road), that linked Egypt to the Sudan, and points further south. After leaving the Valley, travellers had to cross about 200 km of barren desert before reaching Kharga, and a source of water. Here the north-south route met the east-west tracks that connected Dakhla and Upper Egypt. In the 4th century AD, Ain Gib must have been the first water source for travellers coming from the north after an exhausting journey, and the last for those who departed in the opposite direction. The area directly to the south of the fort is the location for at least five large wells which presumably served as the major water source for caravans at this site.

During the 2002 survey we identified a portion of what may have been the ancient caravan route that ran west of Ain Gib and Qasr el-Sumayra, and then headed south towards Muhammed Tuleib and Ain Ain Lebekha (see A.R. below). The diminutive fort of Gib, perched on a rock outcrop, probably acted as beacon and a check-point for travellers. To the north of Gib, in line with the fort, on another high rock outcrop, we discovered the remains of a small look-out or watch-tower. This was partially rock-cut and partially mud-brick built. It no doubt provided an advance view of activities along the caravan route. Toward the north and north-west the remains of cairns were discovered. Clearly, some sort of route going in what appears to be the direction of Baharia and Farafra was in use at some time. The length of this has yet to be determined (see A.R. below).

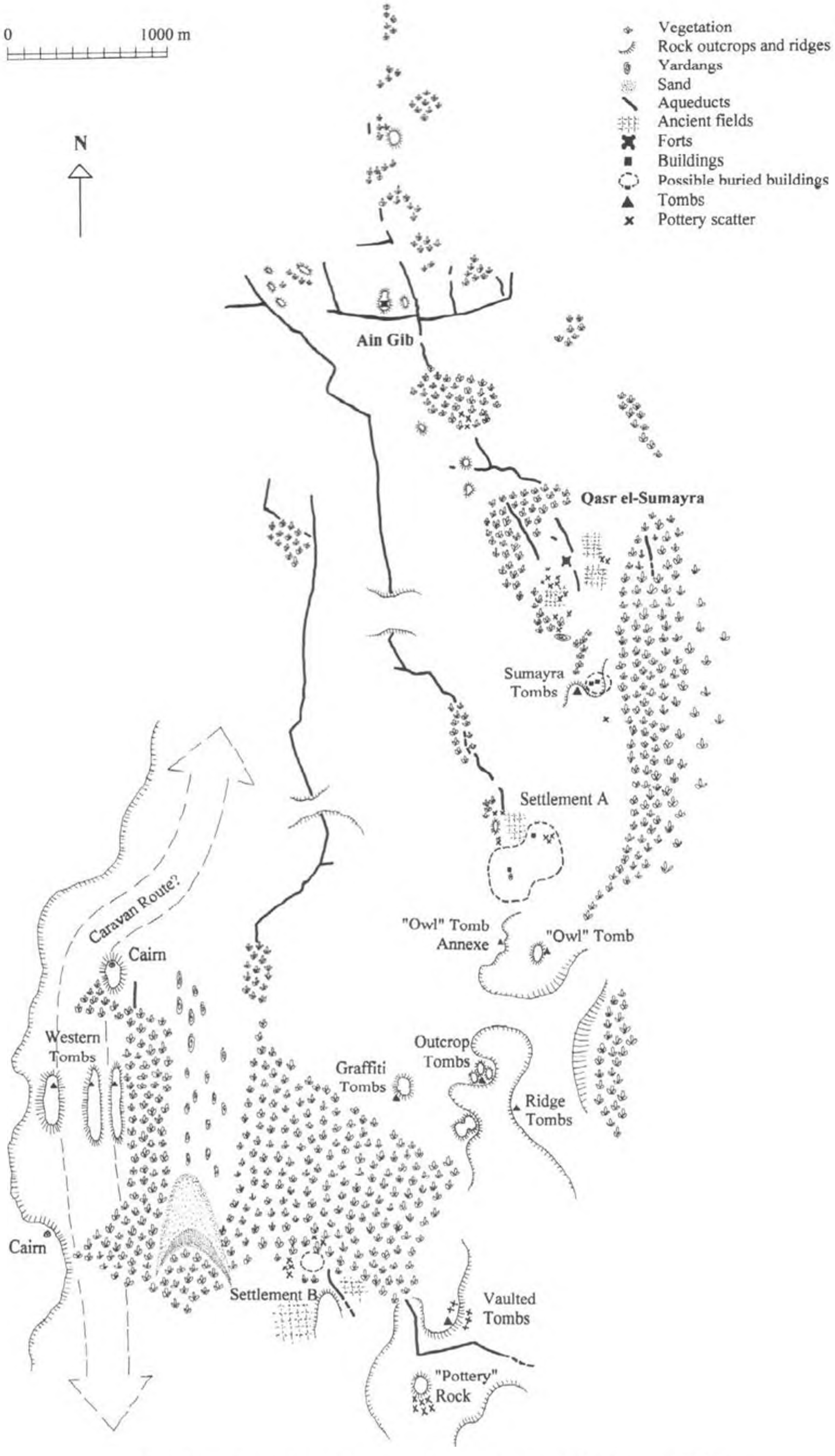

Fig. 1: General overview of the surveyed areas (Drawing by C. Rossi, ©NKOS)

Qasr el-Sumayra, a smaller counterpart of Gib, was located less than 2 km to the south of Gib. The two forts are very similar architecturally (see C.R. below). However, the nature of Sumayra seems to be dramatically different from that of Gib. Qasr Gib, situated on a prominent rocky outcrop is clearly a look-out station which controlled the caravan route and access into the oasis. Thus far, there is no indication of any other large scale settlement around the site. However, Qasr el-Sumayra is surrounded by other mud-brick structures whose presence is indicated by undulating mounds and concentrations of potsherds. Kilns, ovens, glass, faience, coins (yet to be conserved and identified), shaped granite and limestone fragments found at the site indicate an active settlement. Extensive field systems stretch to the south and east. Just to the south of the site is a necropolis (see IKRAM [S.I.], pp. 81–84 below), with an associated structure that might have been used for embalming or by embalmers, or be otherwise associated with the necropolis in some way.

The irrigation system for the two sites is a remarkable feature. These underground aqueducts have been traced from the north of Gib, going south, linking the fields of Gib and Sumayra. The presence of lines of vertical shafts near Qasr el-Gib had been noted in the past, but we discovered that those shafts are in fact part of a vast underground water system, that covered an area of at least 8.5 km by 3 km (see SCHACHT [I.S.], pp. 84–86 below), thus matching the size of the already known aqueducts of Umm el-Dabadib[1] and Dush[2], both in this oasis.

Remains of various activities have been located along this aqueduct. Traces of ancient cultivations have been found in at least three areas. Some plots have been included in the theodolite survey and photographed from the air (for one example see I.S., in: *MDAIK* 59, 2003, pp. 411–423). In the 2002 season we started an archaeobotanical study to establish the potential of the area. The majority of remains include olive, date, three different types of wheat, and grape (see CLAPHAM [A.J.C.], pp. 89–91 below). The results were encouraging, and further research has been planned for the future.

South Sumayra and Settlement A

The aqueducts continue to run south of Sumayra, with occasional possible field systems being identified. The area of South Sumayra is the site of Settlement A. The scattered underground aqueducts that start to the north of Qasr Gib converge at the fort and form larger, concentrated water-courses. Aqueduct Q3 (see I.S below) ran all the way to Qasr el-Sumayra, and fed the large areas of cultivated fields that were located around the fort. The underground aqueduct marked as Q2, instead, fed Settlement A. This site, perhaps a farm, proved to be a much larger complex than was first suspected (see Warner [N. W.], pp. 80–81 below). It consists of several mud-brick structures, kilns, ovens, storage areas, possibly animal pens and a complex field and water system (Taf. 9a). The corners of many of the smaller plots were marked by a single palm, or a cluster of palm trees. Some of the large plots are delineated by dry stone walls, preserved to over a metre in height, which might have provided protection for an orchard. Immediately to the south of the site, are a few rock-cut tombs, cut into a rocky outcrop (see S.I. below), which probably provided the burial ground for the settlement.

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[1] C. ROSSI, *Umm el-Dabadib, Roman settlement in the Kharga Oasis: description of the visible remains*, in: *MDAIK* 56, 2000, Fig. 2.

[2] M. WUTTMAN ET AL., *Premier rapport préliminaire des travaux sur le site de Ayn Manawir (oasis de Kharga)*, in: *BIFAO* 96, 1996, pp. 385–451.

Maghatta Area

To the south lies a large area that is locally called 'Maghatta'. This area hosts the largest number of cemeteries (see S.I. below) found thus far. Maghatta is an interesting area, but difficult to interpret. Whilst Gib, Sumayra and South Sumayra are relatively intact, this southern area has been deeply modified by the introduction of modern watermelon cultivations, that have literally turned the soil upside down and possibly destroyed, or at least disturbed, many of the archaeological remains. An extensive watermelon cultivation, largely abandoned and half-covered by an enormous sand dune, surrounds and partly encroaches on Maghatta, thus making any close investigation difficult. Settlement B is located at the edge of one such cultivation, half covered by sand. It consists of the remains of sandstone and mud-brick buildings. The stone building might be religious, or perhaps administrative. The mud-brick buildings are well preserved, some with their plaster remaining. They are also preserved, albeit under sand, to roof height, as the intact vaulted ceilings of some of these structures are visible. The finds scattered around the area include mounds of pottery, limestone and granite fragments, faience fragments, and unfired loom weights. A variety of tomb-types (see S.I. below) were found in the area.

South of Maghatta, the desert turns flat and barren, but the water system may have continued in a south-east direction towards what is now the remains of yet another watermelon cultivation. In the northern, more intact area, patches of vegetation cover long sections of the underground aqueduct, perhaps feeding from leaks of the subterranean conduits. In the southern area, watermelon cultivations were either established where such patches of vegetation already existed, or were purposely implanted on top of ancient aqueducts. The result is that large surfaces have been obscured by the presence of these cultivations, and establishing a date for some of the few surviving water systems and their associated remains may be difficult or, in some cases, impossible. It is tempting to suggest that the Gib/Sumayra water systems were connected with Ain Ghazal, the small oasis a few kilometres to the south. Here it is possible to see the remains of what might be part of a mud-brick settlement and a cemetery, probably dating to the 4th century AD.

Ezbet Muhammed Tuleib

The site of Muhammed Tuleib is partially covered by dunes, and was therefore difficult to survey. The site is centered around the remains of a large mud-brick enclosure that might have started its life as a fort (Taf. 9b). The visible portions, however, more closely resemble a small temple enclosure wall. Unlike the forts of Ain Gib and Qasr el-Sumayra, the entrance is not on the south, but on the west. It is quite possible that the building was modified several times throughout its history, but without excavation it is currently impossible to determine. Evidence of a significant settlement surrounding the enclosed building, includes mud-brick structures, kilns, loom weights, glass, pottery mounds, cemeteries (both to the east and west), underground aqueducts and water supply systems leading to fields. This building appears to provide an east-west connection between the forts of Umm el-Dabadib, Ain Ain Lebekha, and the rest of the oasis.

Conclusion

In conclusion, it appears that the forts of Ain Gib and Qasr el-Sumayra were just one part of a large, complex, but scattered community that lived at the borders of the oasis in the Roman period. The presence of architecture of a military appearance suggests that one of the tasks of the local population may have been controlling the northern access to the oasis. It is more likely that this required little actual military activity, but was more passport control and taxation of goods and road-use.

The large underground aqueduct, running north to south, may have been used to cultivate and to support desert travellers as well as the local communities. Given the history of agricultural exploitation of the oasis, it is logical to assume that the tradition continued, perhaps even to the extent of supplying the Nile Valley with produce in addition to purveying to the oasis' and travelling populations. The presence of a significant number and variety of tombs suggests the existence of a long-term, socially stratified permanent settlement. It should also be noted that prehistoric remains were found scattered throughout the surveyed locations, indicating that some form of habitation of this area had been in existence from the earliest times.

S.I./ C.R.

Investigation of Ancient Routes in the Study Area

The general objective of this research in the North Kharga area is to contribute to an understanding of how different sites within the oasis depression and the wider western desert may have articulated with each other via routes and tracks, and to assemble (by survey) evidence as to how such tracks may have been used. At present, knowledge about the organisation of traffic within and between the oases in late antiquity remains incomplete[3].

The 2002 season of this work was to explore the area around the sites of Qasr el-Gib and Qasr el-Sumayra, although due to the prioritising of other activities only about four working days could be dedicated to this part of the survey. The investigation began on foot with a search pattern encompassing the area within an approximate two kilometre radius of a focal point at Qasr el-Gib. Once a possible route had been identified, the survey continued by vehicle, following the route and stopping to investigate and record features by GPS.

Areas lying immediately to the east of Qasr el-Gib were found disturbed both by modern agriculture and inundation by aeolian sand, and so investigation was most productive to the west. Successive traverses revealed what appeared to be a broad track following a shallow depression approximately 2 km south-west of Qasr el-Gib. The orientation of this 'track' was approximately along a north-south axis. The principal characteristic of the track was a slight difference in the shading and texture of the sand along it from that of the surrounding area. At ground level, this difference was not easily discernible, but from an elevated position it was clearer, giving the impression that the soils had been compressed over a long period of time. A similar phenomenon can be observed along the length of the old Darfur caravan route running south from Baris. Working on the assumption that this surface anomaly was in fact some kind of track, an attempt was made to follow it. The route continued north beyond the latitude of Qasr el-Gib but then it (or a branch of it) appeared to swing to the northeast and was lost (Fig. 2).

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[3] R. MORKOT, *The Darb el-Arbain, the Kharga Oasis and its forts and other desert routes*, in: D. BAILEY (ed.), *Archaeological research in Roman Egypt. Proceedings of the Seventeenth Classical Colloquium of the Department of Greek and Roman Antiquities, British Museum, held on 1–4 December, 1993*, Ann Arbor 1996, pp. 82–94.

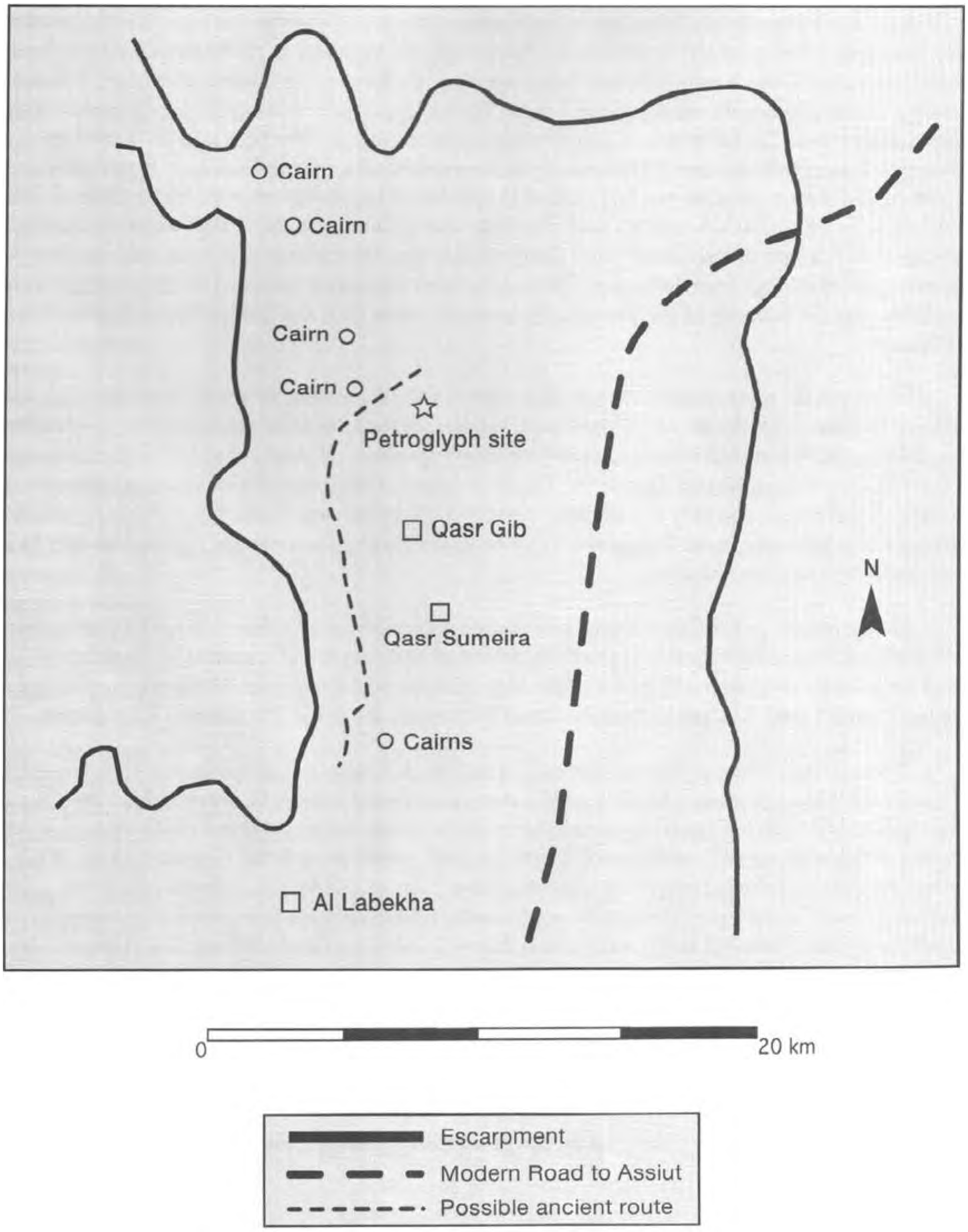

Fig. 2: Possible caravan routes in North Kharga (Drawing by A. Rowe)

A further 2 km east in a broad sandy depression, a sandstone outcrop was found bearing numerous inscriptions and petroglyphs (Taf. 9c). The petroglyphs appeared to represent many periods and styles, the oldest of which seemed to be a large engraving of a boat on the summit of the rock. The most striking of the petroglyphs were unusual human figures, apparently dancing. From the patina of the rock surface, these figures appeared considerably more recent than the boat and their costume (including a figure wearing a bird's head mask) uncharacteristic of anything from later Egyptian history. These figures seem to have no parallel in any of the published engravings recorded on the Darb el-Ghubari[4] or at Gebel el-Teir[5]. A separate rock drawing, clearly showing a camel rider mounted in a style unique to Africa west of lake Chad[6] raises the possibility that the site may have been a resting place for caravans passing through from that region[7]. Although a Greek inscription was found on the outcrop, it seems probable that the majority of the petroglyphs are more recent than the sites of Qasr el-Gib and Qasr el-Sumayra.

Visible on the north-western skyline from Qasr el-Gib (approximately 6 km), is a single cairn on a hill, not far from where the aforementioned 'track' was lost. Beyond this cairn was found a sequence of three more cairns, each just visible from the previous which spanned a distance of 15 km in the north-west corner of the northern Kharga depression. The final cairn was situated at a wide opening in the escarpment wall that serves as an inlet to a second depression lying to the west. These cairns obviously served to mark a route. However, it was judged that at least some of these cairns were not ancient and their function and origin remains unknown.

South-west of Qasr el-Gib, traces of a route were discernible for a further 4 km before passing below a hill with a large collapsed cairn at the peak. A vertical shaft tomb and several other burials were located on hillsides overlooking this part of the way. After an additional 2 km the route was finally lost beneath aeolian sand, heading in the direction of the Roman site of Ain Ain Lebekha 8 km distant.

Evidence for a route up the western side of the North Kharga depression is at present largely circumstantial. Although it seems highly probable that a direct route linking Ain Ain Lebekha with Qasr el-Sumayra and Ain Gib (and possibly proceeding on to the eastern escarpment) was used in antiquity, only extensive fieldwalking and collection of datable artifacts would provide the necessary proof. While it seems possible that the petroglyph outcrop may have been visited by successive travellers over a long historical period, no evidence links it to the neighbouring Roman sites. However, it is not inconceivable that medieval travellers followed earlier routes when they were still more clearly defined than they are today.

A.R.

Military Architecture: Qasr el-Gib and Qasr el-Sumayra

Qasr el-Gib and Qasr el-Sumayra were briefly investigated in 1978 by J. Gascou, G. Wagner and P.J. Grossmann, who then published a short report accompanied by a plan of Qasr el-Gib[8]. One of the aims of NKOS 2002 has been to prepare plans and sections of both buildings and to attempt a reconstruction of their original appearance. In this preliminary report only the two plans have been included, as the sections and reconstructions require a detailed discussion that is beyond the scope of this preliminary report.

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[4] H. Winkler, *Rock drawings of Southern Upper Egypt* II, Oxford 1938.

[5] A. Fakhry, *The Rock Inscriptions of Gabal el Teir at Kharga Oasis*, in: *ASAE* 51, 1951, pp. 401–434.

[6] R. Wilson, *The Camel*, London 1984.

[7] A more detailed discussion of these unusual rock drawings is currently in preparation.

[8] J. Gascou/G. Wagner/P. Grossmann, *Deux voyages archéologiques dans l'Oasis de Khargeh*, in: *BIFAO* 79, 1979, pp. 16–20.

The architecture, the building technique and the materials employed in the construction of the two small forts of Gib and Sumayra are so similar to one another that it appears likely that the two buildings were erected in the same period, for a similar purpose, and according to a common design.

Their plan is very similar, Qasr el-Sumayra being a 'reduced' version of Qasr el-Gib (Fig. 3). Both consist of a thick enclosure wall pierced by one single entrance from the south, and completed by round buttresses at the four corners. In both cases, the upper part of the wall hid a protected passage that ran all the way around the fort. Inside, the stairs were immediately to the left of the entrance, and the rest of the space was divided into two rows of vaulted chambers facing each other across a small central space. They were both built principally of mud-brick, whilst limestone and sandstone was used for the lintels above the entrance, and perhaps for other elements such as thresholds and steps that are now buried or have since disappeared.

The main difference between the two buildings concerns their size and their position. Qasr el-Gib covers an area of about 16 x 16 m, and consisted of three levels (including the ground floor) arranged around a central courtyard. Even if the latter is nowadays almost entirely occupied by debris, several ground floor chambers are still accessible. These are rectangular rooms, covered with plastered parabolic vaults, provided with one doorway and one little window, both facing the interior of the fort. The remains of several niches are visible in some chambers and in the courtyard.

The stairs were located to the left immediately after the entrance, and were arranged around a central rectangular pillar. The design of the first floor appears to have been slightly different, with a passage running all around the courtyard and thus reducing the depth of some of the chambers[9]. By comparing GROSSMANN's and our plan, it is clear that in the last twenty-five years the locals must have used the northern wall as a source of bricks. About half of the thickness of the wall has been quarried away, and a passage has been opened at the bottom. This hole in the wall, that channelled a very strong wind into the interior of the fort, thus contributing to its deterioration, was bricked up by NKOS in 2002.

The lack of windows and its raised position makes Qasr el-Gib look larger than it is. There is no doubt that its principal aim was to mark the entrance to the oasis and to control the caravan route that descended from the plateau. Another function may have been to guard the first and northernmost shafts of the large underground water system that covered an elongated north-south area of at least 6.5 x 2.5 km.

The diminutive Qasr el-Sumayra covered an area of only 11 x 11 m. In 2001 the interior of the fort was completely filled by debris, but between April 2001 and January 2002 someone removed tons of loose mud-bricks from the fort, and threw them outside the east face. This operation exposed more of the interior, and allowed a glimpse of the internal arrangement of the building. The fort probably consisted of two floors only (ground and first), both in turn consisting of two rows of vaulted chambers facing each other. The stairs, in the south-west corner, were supported by a series of arches and ran around a small central shaft. Because of the ruined state of the building and the amount of debris, several details of its internal arrangement are still unclear.

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[9] *Loc. cit.*, Fig. 1.

The position of Qasr el-Sumayra is not as impressive and commanding as that of Qasr el-Gib. It was built on a flat terrain and is barely visible from the distance. Its position, at the end of the line of *qanats* (underground water system) that starts around Qasr el-Gib, might be related to the control of the water system (Fig. 1). The cultivated area extended southwards well beyond Qasr el-Sumayra, but the *qanats* between the two forts might have had a special strategic importance, being the first water source encountered by travellers descending into the oasis after an exhausting trip from Middle Egypt. It is possible that the area of Gib and Sumayra was a gathering point for caravans departing from and arriving at the oasis. Qasr el-Gib and Qasr el-Sumayra may have acted as military checkpoints, where travellers and goods were inspected and taxes collected. In conclusion, it may be suggested that the two small forts were part of a precise strategic design to control the northern area of the oasis[10].

As noted by several authors, Kharga is dotted with constructions that may be loosely classified as forts[11]. MICHEL REDDÉ, however, argued that not all of them must have been originally planned as military installations for the Roman army. Dush, for instance, may have been conceived as a group of strongly defended magazines, and then reused by the army in the 4th century AD. Only a few buildings show an unmistakable military character, and Qasr el-Gib and Qasr el-Sumayra are among them[12].

The evidence gathered in the area suggests that Gib and Sumayra were active during the 4th century AD (see A.D. below). These two small installations may have been the Roman answer to a specific local threat or, from a wider perspective, may have been part of a much larger scheme to reinforce the border of the Roman empire, that was started by Diocletian at the beginning of the 4th century AD and was continued by several Roman emperors after him[13]. The 4th century was a century of intense Roman activity in Kharga and Dakhla (grouped together as the Oasis Major), but the 5th century witnessed a significant reduction of the occupation of several major sites, including Dush in Kharga[14] and Ismant el-Kharab in Dakhla[15]. The area of Qasr el-Gib and Qasr el-Sumayra, with its lack of clear evidence of any 5th century activity, seems to have shared the same destiny.

C.R.

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[10] Cfr. R. BAGNALL, in: *JARCE* 14, 1977, pp. 71–72.

[11] See for instance G. WAGNER, *Les Oasis d'Égypte*, Cairo 1987.

[12] M. REDDÉ, *Les oasis d'Égypte*, in: *JRA* 2, 1989, pp. 288–289; ID., *Quinze années de recherches françaises à Douch. Vers un premier bilan*, in: *BIFAO* 90, 1990, p. 288; ID., *A l'ouest du Nil: une frontière sans soldats, des soldats sans frontière*, in: V.A. MAXFIELD/ M.J. DOBSON (eds.), *Roman Frontier Studies 1989*, Exeter 1991, p. 491.

[13] P. SOUTHERN/K.R. DIXON, *The Late Roman Army*, London 2000, pp. 41–45.

[14] G. WAGNER, *Le camp romain de Douch (Oasis de Khargeh – Egypte)*, in: *Studien zu den Militärgrenzen Roms* III, *13. Internationaler Limeskongreß, Aalen 1983*, Stuttgart 1986, p. 672.

[15] C.A. MARLOW/A.J. MILLS (eds.), *The Oasis Papers. Proceedings of the First International Symposium of the Dakhleh Oasis Project. Dakhleh Oasis Project Monograph 6*, Oxford 2001, p. 57.

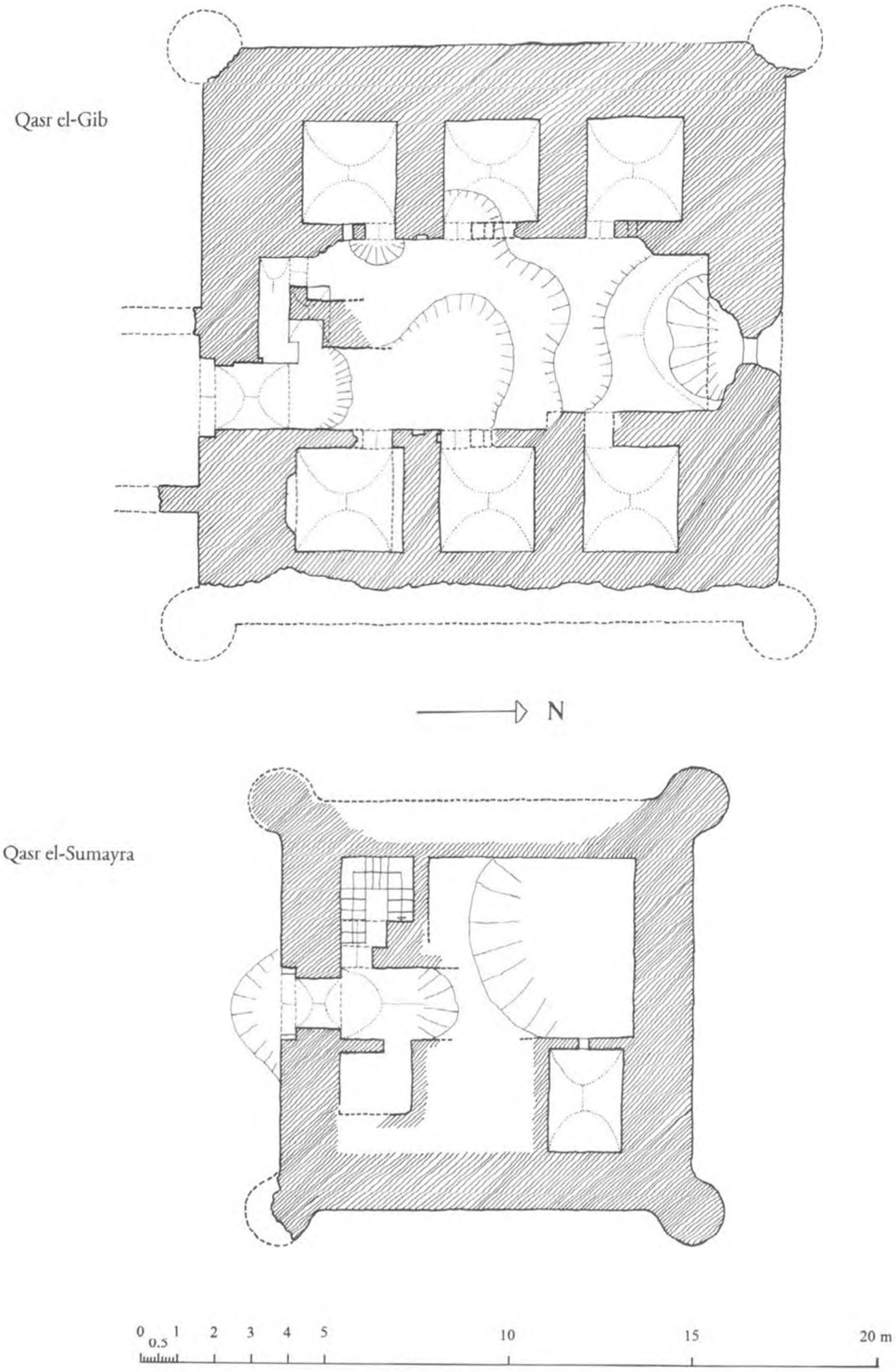

Fig. 3: Plans of the two forts of Sumayra and Gib (Drawing by C. Rossi, ©NKOS)

Domestic Architecture

The essential and omnipresent building unit used in Roman period domestic architecture of the Kharga Oasis is the mud-brick barrel vault. Vaults can be superimposed to create extensive multi-storey structures, many of which survive intact. Vaulted spaces vary enormously in size from the small (1.4 m x 3.2 m) to the vast (9 m x 19 m), although the largest vaults are reserved for non-domestic buildings. These vaults tend to the elliptical in profile, and are in most cases laid in inclined courses that allow for construction without the use of formwork (the traditional vernacular vaulting method still employed in the south of Egypt). The mud-bricks themselves are of a sandy composition, and are most probably made from eroded yardangs in the vicinity, with the inclusion of significant quantities of chaff temper. The size of the bricks used on all the sites is 33–34 cm long x 16–17 cm wide x 7–8 cm thick: considerably smaller than pharaonic mud-bricks. Mortar joints in vaults are typically reinforced with shards of pottery or stone. Lintels for doors and niches are formed either by locally quarried rough sandstone blocks, locally available acacia/tamarisk/palm wood (mostly destroyed by insects), or by a variety of mud-brick solutions including arches. Living units have at least a ground and a first storey, and in some cases an additional storey can be postulated. Some units contain double-height spaces. The upper floors are accessed by mud-brick stairs supported on arches, with rough sandstone often being used for the stair-treads. Wall niches provide the most obvious form of interior spatial articulation, and these vary considerably in design (flat-headed, round or pointed arched, apsidal, square etc). Some niches clearly contained wooden shelves (and were perhaps faced with doors), while others are of a more decorative nature with applied mud brick framing in the form of colonnettes and cornices. At many sites, traces of lime plaster with chaff temper can be found that had fallen off walls, and the floors are also presumed to have been plastered with mud: an expectation that could only be borne out by the excavation of collapsed mud-brick and wind blown sand.

At the site of Ain Gib, no surface evidence for subsidiary structures or domestic settlement survives. This situation, however, is not the same at Sumayra, where remains of kilns and destroyed structures can be seen particularly to the south and south-west of the fort. The most obvious standing remains are located at Settlement A, to the south of the fort itself, where a complex of mud-brick buildings survive, apparently grouped around a cultivated area or farmstead, with its own water supply fed from an underground aqueduct. These buildings have been dated through pottery analysis of sherds used in their construction to the 4th century AD.

The most unusual of this group is an isolated structure oriented on a north-south axis, which is composed of five rooms at ground level (Fig. 4). This building was originally a two-storey structure, and traces of the staircase vaulting and sandstone treads can still be seen at the north-east corner. The entrance to the house, for this is the most obvious interpretation of what the structure's function must have been, is from the south – away from the prevailing wind – and leads to a small vaulted anteroom. Beyond this, accessible through a door with a stepped double palm log lintel, is the separately enclosed stairwell, which was supported by a series of eccentric mud-brick arches. Another door, again with a roughly shaped palm log lintel, leads into the principal room of the house. Although the interior is largely filled with collapsed mud-brick and wind blown sand, requiring an estimate to be made of the original height, enough details survive to permit a reconstruction of the design of this space. The room is double-height and is cross-vaulted in a distinctive fashion, with paired broad (north-south) and narrow (east-west) intersecting vaults. This design is paralleled at other sites in the oasis, notably at Ain Ain Lebekha and Ain Umm el-Dabadib. An honorific square-headed niche flanked by colonnettes, which may have been the emplacement for a figurine of a local god, faces the entrance to the room at high level slightly off its east-west axis. Subsidiary niches of different designs (arched and fronted by a straight lintel or pointed arched) can be seen at the lower level, which would have been more immediately accessible for day-to-day use. One of these niches has the emplacement for a timber shelf. Two small high level rectangular window openings survive in the south wall. No traces of the lime plaster or lime wash that most likely finished the interior survive. To the west of the principal room, and directly accessed from it, are two smaller elliptically vaulted rooms, which may have functioned as sleeping spaces. These are also furnished with niches that cut into the springings of the vaults. The precise configuration of the upper floor of the house is unclear due to collapse, but it is likely that further vaulted rooms superimposed on those of the ground floor were located here. These may have served as spaces for storage or food preparation.

The very exact parallel of the distinctive central room of this house at other oasis sites would suggest that such a standardised element was the mark of some kind of official architecture which followed an *a priori* design. Further work will attempt to gather more evidence to support this theory, which is advanced in order to explain the manifestation of such a sophisticated architecture with a clearly developed spatial hierarchy in the Oasis Magna.

N.W.

Funerary Architecture and Mummification in North Kharga

Tombs were the most common feature found during the course of the survey, second only to the *qanat* apertures. Three basic tomb types have been thus far identified in Kharga Oasis: rock-cut, shallow holes, and a combination of poor quality rock/gravel-cut and mud-brick construction.

Cemeteries were noted at Sumayra (to the south of the fort), at Settlement A (at Sumayra South), west of Settlement B, at several places in the Maghatta area (the Vaulted Tombs, the Ridge Tombs, the Outcrop and Graffiti Tombs), and to the east and west of Muhammed Tuleib, at Umm el-Dabadib (to the east) and at Ain Ain Lebekha (to the south, the north, and the west). Only a few isolated tombs were found to the south of Ain Gib.

The simplest (and most difficult to identify during a survey) type of tomb is the shallow hole variety. A shallow hole is dug into the desert surface and a body deposited within, and then covered over. The few identified south of the fort at Ain Gib were easily identified as they had been robbed and the bodies exposed. Some other possible tombs were also noted in this area. The orientation of the graves could not be established as they had been so badly disturbed. Some of the graves found at the Ridge Tombs were similarly constructed.

Rock-cut tombs appeared wherever suitable rock was available. As most of the oasis stone is friable sandstone and shale, such tombs only appeared at sites where the escarpment was close, or where more solid sandstone outcrops were found. Rock-cut tombs were found in a few instances south of Settlement A, at Ain Ain Lebekha, the Outcrop and Graffiti Tombs, and at the site of the Western Tombs, west of Settlement B. These tombs are cut into the rock and consist of a single rectangular chamber measuring between 2.5 m and 4.5 m in width, and 2.5 m to 4 m in depth. Many are destroyed by internal rockfalls, so that it is difficult to determine their precise shapes. No decoration remains on the walls (internal or external) of these tombs. Bodies were placed in the tombs, although there is some indication of shafts in the Western Tombs and the Umm el-Dabadib cemetery. An exception to these simple

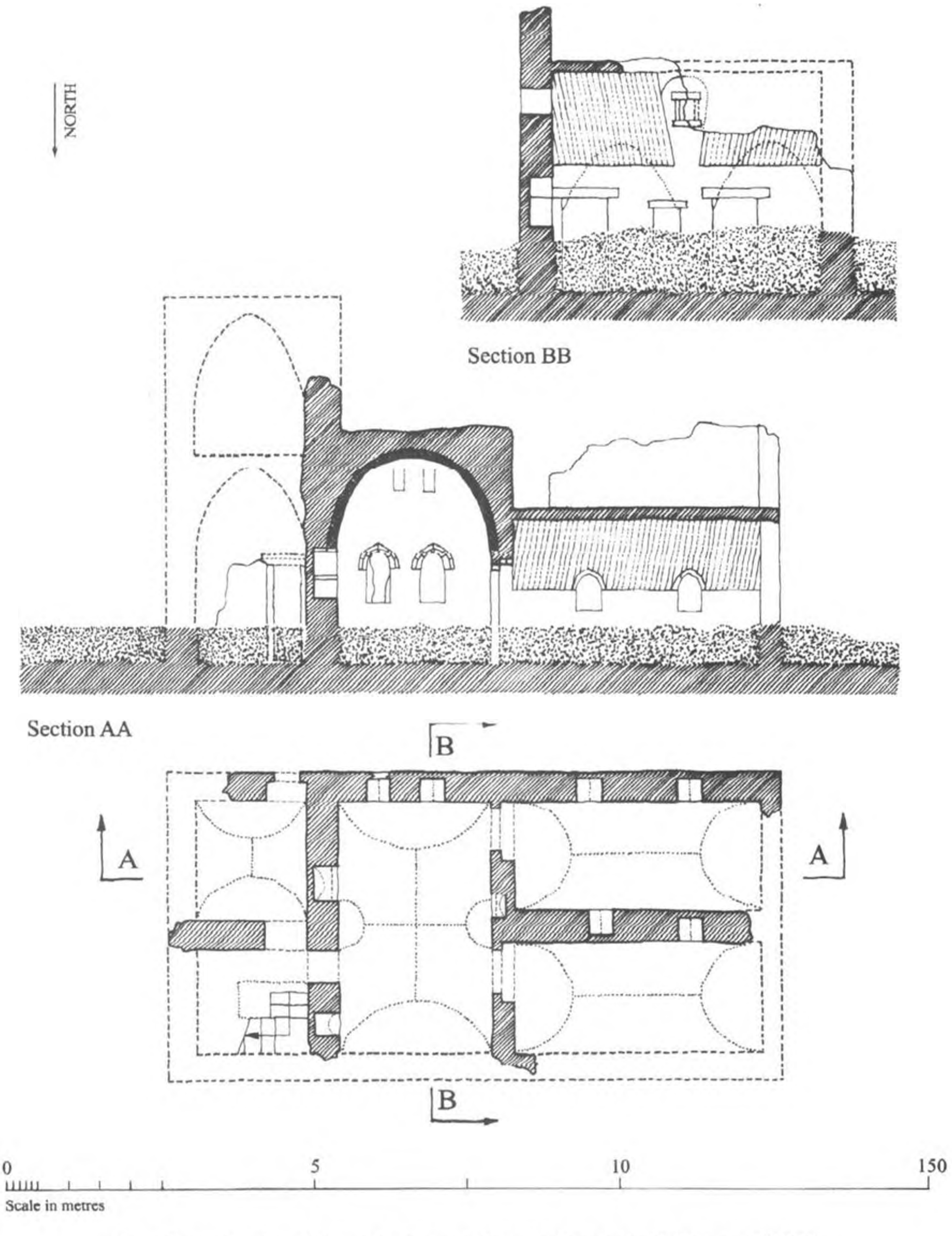

Fig. 4: Plan and section of a house, Settlement A, Sumayra (Drawing by N. Warner, ©NKOS)

tombs is the so-called 'Owl Tomb' located south of Settlement A, and named for its current occupant. The tomb is carved into the eastern face of a sandstone outcrop, and has plain niches carved into the northern and southern walls. The exterior had a small courtyard created by mud-brick walls. A horizontal recess carved above the exterior of the doorway suggests that it was originally the location of a decorated limestone lintel, perhaps inscribed with the name and title of the tomb-owner(s).

Shaft tombs are also found in some of the sandstone outcrops. These are simple shafts cut straight down (as far as can be seen without clearance of the sandy rubble within) into the rock, presumably opening into a larger chamber that contained the body and grave goods, if any. Examples of these have been located at the Western Tombs, although it is quite possible that more remain undetected at other sites.

The most common tomb-type found at Kharga Oasis is the combination of poor quality rock/gravel-cut and mud-brick construction. The majority of the oasis is devoid of solid rock, so rectangular tombs were cut into the poor quality rock/gravel/*tafla*, and then lined with mud-brick and covered by a vaulted roof, similar to the roofs found in houses. This tomb type, common throughout the oasis, was found south of the Sumayra fortress, at the Vaulted Tombs, at Muhammed Tuleib, and in some areas of the Ridge Tombs. Originally the interior (and perhaps also the façade) of these tombs was covered by mud-plaster and whitewashed. This might have further been decorated with paint. The location of the burial chamber is not established as none of these tombs have been cleared by NKOS. However, the burials could not have been very deep as the robbed remains of the bodies have been scattered around the tombs by thieves. The method of vaulting and the bricks used in these tombs are identical to those found in the settlements and forts in style, measurements, and consistency.

The dating of the tombs is currently under study. Due to their disturbed nature and the fact that they are in most cases only partially cleared, dating depends on basic architectural features and associated surface remains. One must remember, however, that many of these tombs can be multi-period as they were quite possibly reused. The majority of the surface pottery is of the Roman Period, but in some instances the fineness of the painted cartonnage fragments suggests an earlier date, most probably late Ptolemaic.

The position and orientation of the tombs is as might be expected, given the geology of the oasis: they are dug wherever there is a possible location. Almost all the tombs are oriented east-west, regardless of whether they are cut into the western or eastern side of a settlement. A few tombs are carved into the southern side of a protruding rock, no doubt to protect the tomb from the strong north wind.

It is hoped that future work will provide more information concerning social stratification as evidenced in funerary architecture, as well as answers to chronological questions.

Observations on Mummification

The majority of the human remains show evidence of mummification of different types. Remains of men, women, and children are all represented at the different sites. Some corpses were excerebrated, and most appear to have been eviscerated, although a few corpses showed no signs of either procedure. When present, the evisceration incision is on the left side, as usual.

Generally the arms lay along the body with the hands next to or covering the genitalia. This seems to be the case for both men and women. Oils, resins, and possibly bitumen were used during the course of mummification; until now no chemical tests have been carried out to determine the precise materials that were used.

Linen bandages of different qualities are present. Some examples of pink and red bandaging, associated with the Late Ptolemaic and Early Roman Periods were also found. No mummy thus far discovered shows the highly elaborate outer coffered bandaging so common in the earlier Roman periods. Fragments of painted wooden coffins and cartonnage were recovered from the Western Tombs.

S.I.

Survey of Hydraulic Systems

Survey work during the NKOS 2001 season revealed the presence of well-preserved and extensive water systems in the area of Qasr Gib and Qasr Sumayra, Ain Ain Lebekha, and also at Umm el-Dabadib. An examination and survey of the hydraulic systems in the project area began during the 2002 season with the aim of recording the geographic extent and nature of the remains. The survey also hoped to begin building an understanding of their origin, construction and utilisation.

During the 2002 season, extant remains on the ground were examined in detail at Ain Gib and Qasr el-Sumayra and preliminary investigations were undertaken at the sites of Ain Ain Lebekha and Umm el-Dabadib. The nature of the remains at all sites is consistent with the appearance of the hydraulic systems found elsewhere in the Middle East and Africa, known as *qanats* (also described in specific regions as *foggara*, *kareez*, *falaj*, *khettera* and *manwar*). The *qanats* in Kharga tap the waters of the Nubian Sandstone Aquifer and in the project area they tap the aquifer at the foot of the escarpment at the northern edge of the oasis. A sloping underground tunnel moved the water by gravity flow to where it was needed at settlements and fields. The most obvious remains of the *qanats* are the circular mounds of spoil on the surface that mark the openings of the shafts that access the underground tunnel. These shafts aided in the construction of the *qanat* tunnel (providing ventilation and access to the workface at the tunnel) and could be used afterwards for its maintenance and cleaning. In some areas the survey was also able to examine the surface channels which conveyed water from the *qanat* to fields and settlements. At Ain Ain Lebekha and at Umm el-Dabadib it was possible to examine the tunnels and shafts of the *qanats* below the surface.

The methodology of this season's study of the water systems was firstly to identify the archaeological remains of potential hydraulic systems and then to record their location with Total Station survey equipment (or GPS) where time and terrain allowed. Accurate readings were recorded by Total Station for the *qanat* shafts located in a 600 metre radius of Qasr el-Gib and Qasr el-Sumayra and also for those in the 4 kilometre distance between the two sites. GPS readings were taken for shafts lying outside of these easily accessible areas by recording every tenth shaft on a *qanat* line, with distances between individual shafts paced using a known and measured step.

Using these recording methods the survey was able to record the locations of over 600 *qanat* shafts on three major *qanat* lines, covering an area 8.5 km north to south and 3 km east to west. From these results the NKOS has produced initial plans of the geographical location and distribution of the hydraulic systems over a large part of the NKOS project area.

Preliminary Results[16]

The major feature of the remains that were examined were the openings of the *qanat* shafts at the surface (and their associated mounds of spoil) indicating the course of the *qanat* below ground.

Qanats Q1, Q2 and Q3

Three main *qanat* lines were identified by the survey in the area around Qasr el-Gib and Qasr el-Sumayra (Fig. 1). Q1, which ran north-south in the area of Qasr el-Gib, seems to be associated with the two forts and their related fields and settlements. Q2, to the west of Q1, supplied a settlement and field systems in its area. Q3 ran north-south further to the west of these systems and at this stage no specific field systems or settlements have been identified with it. At various points along the length of all three *qanat* lines, short branches diverged from the main *qanat* line into nearby slopes to collect additional water to supplement the supply of the main line.

Q1, Q2 and Q3 had been sited to take advantage of the surrounding topography, their courses favouring the lowest contours and the sides of wadis. The *qanat* lines never lay closer to each other than 400 metres, reflecting not only the influence of topography but probably also a desire to avoid depleting the yield of a nearby *qanat*. Due to time constraints, mother wells (i.e. the first shaft of a *qanat* line) were not identified this season and neither were the *qanat* termini, although evidence indicated that they may all have continued beyond the forts, settlements and field-systems they supplied to destinations further to the south of the area examined this season.

The number of shafts recorded for each *qanat* line ranged from 205 to 214 shafts and the distances between individual shaft openings was most commonly 15–20 m, but did range from 12–21 m. The distance between shafts seemed to remain constant for groups of 20–40 shafts.

The majority of shafts were cut into the natural sandstone, which forms the floor of the depression in most of this area, in some cases first cutting through the shale that overlies the sandstone in some places. Nearly all of the openings examined had been secured by lining the upper part of the shaft and the opening itself. A variety of materials had been used, with cut sandstone blocks being the most common, but a variety of other local stone was also present, and in some cases even fired bricks and cement. The shaft openings were further protected from erosion and structural damage by the mounds of spoil (some up to 2 m in height), excavated during the construction of the *qanat*, and piled up around the mouth of the shaft. The size of the shaft openings varied from 50 cm to nearly 2 m in diameter.

The shafts were originally covered with stone slabs to protect the tunnel from falling debris and wind-blown sand and to prevent water contamination and evaporation. Most of the shafts examined were covered with sandstone slabs, which lay scattered around the opening, and in some cases were still found *in situ*. At some openings, especially where the *qanat* line travelled over terrain where the sandstone was scarce or non-existent, shafts were covered with slabs of other local stone, including limestone. Depths of the shafts could not be obtained without excavation since all of the shafts examined on Q1, Q2 and Q3 were filled with wind-blown sand.

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[16] For a more detailed discussion of these results see I. SCHACHT, *A preliminary survey of the ancient qanat systems of the northern Kharga Oasis*, in: *MDAIK* 59, 2003, pp. 411–423.

The length of the *qanats* as measured above ground, along the route of the shafts, was approximately 7 km for Q1 and Q2 and 11.5 km for Q3.

Associated with the *qanats* the survey located a number of surface channels that conveyed the water from the *qanats* to the fields and settlements where it was used. In the area around Qasr Sumayra the survey located a long, narrow channel cut into the sandstone, flanked by mounds of spoil from its construction, and possibly from subsequent clearances. Another channel, also cut into the sandstone, with its upper part built of sandstone blocks, was covered with slabs of sandstone and other local stone, secured in a rough mortar. This covered channel was punctuated along its length by small access shafts (for maintenance and cleaning) constructed of unfired mud-bricks surmounted by local stone. These shafts were 45 cm in diameter and rose 30 cm above the height of the covered channel.

Origin and Dating

Without excavation it is almost impossible to date the hydraulic systems examined for the first time this season. Surface pottery at the associated forts, settlements and fields has been dated to the Roman period, and more specifically to the 4th century AD making it very likely that the *qanats* were being utilised during these periods.

The original construction date of the *qanats* is still a matter for investigation. Evidence from Egypt and elsewhere indicates that *qanat* technology was introduced to Egypt during the Persian period[17] and that *qanats* may have even been in use in Egypt before this[18]. The systems examined by the NKOS strongly resemble Persian examples[19]. It is possible that some of the *qanats* were constructed during the Persian period and later maintained and expanded by the Romans. The variety of architectural forms utilised in the construction of the *qanats*, and the large mounds of spoil (which may indicate phases of clearance and reuse) seem to support the idea that the *qanats* were the product of more than one origin and owner. Nevertheless, the association with Roman period sites in the oasis, not Persian, seems to suggest a stronger Roman influence in their construction and maintenance.

I.S.

Preliminary Report on the Pottery from Qasr Gib and Qasr el-Sumayra

During the 2000 and 2001 seasons of the North Kharga Oasis Survey pottery was collected and studied from the sites of Ain Gib and Qasr el-Sumayra. As the aim of the project is surface survey only, the ceramics were collected from the surface within the forts and the immediate area surrounding them. Thus, the pottery has no stratigraphic context to speak of but one can be confident that the pottery relates to the activity of the forts as there is no other architectural evidence, except for the *qanats*, within the immediate vicinity of the forts to suggest human activity.

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[17] D.R. Lightfoot, *The Origin and Diffusion of Qanats in Arabia: New Evidence from the Northern and Southern Peninsula*, in: *The Geographical Journal* 166.3, 2000, p. 218; A.T. Hodge, *Roman Aqueducts and Water Supply*, London 1992, p. 21.

[18] A. Fakhry, *The Oases of Egypt: Bahriyah and Farafra*, Cairo 1974, p. 34.

[19] See A. Smith, *Blind White Fish in Persia*, New York 1953; H.E. Wulff, *The Qanats of Iran*, in: *Scientific American*, April 1968, Figs. 4, 7.

Methodology

Both seasons were short and intensive and it was necessary to have a methodology in place beforehand in order to make best use of the time available. After initially looking over the surface of both sites it was decided to undertake a controlled collection of sherds from each site but also to make a random surface collection of diagnostic pieces, in particular rims. The purpose of the controlled collection was to have a sample of material which would indicate the range of fabrics present at the sites, the relative quantities of these fabrics to each other and the proportion of diagnostic sherds to body sherds for statistical purposes. It was also expected that the sample would indicate the type and range of shapes present and suggest a date range. The random collection of rims was undertaken to augment the controlled sample, expanding upon the diagnostics with better preserved pieces, primarily for dating purposes.

The location for each controlled collection was decided upon by the degree of density of the sherds on the surface and its relative proximity to the fort. An area of the highest density was chosen and a square of two by two metres was laid out. As the sherd scatter within the forts was relatively minimal compared to the surrounding surface, something not surprising given that both forts contain a large amount of their own collapse, the areas chosen were on the surface outside the forts. Every sherd was collected within the square, with the exception of those less than 1.0 cm square in size. The diagnostic pieces were then extracted and the body sherds were sorted according to their fabrics, counted, and thrown away. All the diagnostics were kept for recording. As much of the pottery was badly eroded, due to the exposed nature of the sites, it was decided not to record every diagnostic in detail but only those that were well preserved and large enough to draw. Nevertheless, a note was made of every diagnostic regardless of its eroded condition.

Fabrics

After the initial collection of sherds a field fabric classification system was devised. All identifications were made with a hand lens of x10 magnification. No sherds were tested with hydrochloric acid for their calcareousness and no Munsell readings were taken. Six local fabrics and six Nile valley fabrics were identified, though of all 12 fabrics only six occurred commonly, in particular two local fabrics. One non-Egyptian amphora fabric was also identified.

The overwhelming majority of sherds were made of local clay which Pascale Ballet describes as a kaolinite clay[20]. In describing the pottery fabrics from the site of Dush and its neighbouring villages in the south of Kharga Oasis Ballet states that "la production de Kysis et des villages avoisinants consiste en céramique façonnée à partir des kaolinites locales; la texture est caractérisée par la présence de plaquettes d'argile silicifiées, abondantes dans les productions du Haut-Empire"[21].

Despite not having compared sherds directly with those from Dush, one can still be confident that the clay Ballet describes from the south of Kharga is the same, or very similar to that occurring further north at Ain Gib and Qasr el-Sumayra. The local fabrics occur in varying degrees of coarseness, ranging from an extremely coarse, poorly mixed clay with large 'plaquettes' of shale[22] and abundant quantities of sand dominating the fracture, to a very fine, dense, well-sorted fabric with very few inclusions. The middle of these extremes, i.e. a reasonably well-sorted clay with occasional calcareous particles and shale 'plaquettes', and abundant quantities of sand is the most commonly occurring fabric. The surface has a gritty feel to it and fires either cream or orange. The fracture fires a range of colours, including pale grey, pink, beige and orange. The most common surface treatments are red, cream and yellow coatings.

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[20] P. Ballet, in: O.E. Kaper (ed.), *Life on the Fringe. Living in the Southern Egyptian Deserts during the Roman and early-Byzantine Periods*, Proceedings of a Colloquium Held on the Occasion of the 25th Anniversary of the Netherlands Institute for Archaeology and Arabic Studies in Cairo, 9–12 December 1996, Leiden 1998, p. 34.

[21] *Loc. cit.*

Oasis Red Slip Ware also occurs at both sites. This is a local fineware imitating the red slip finewares produced at sites along the North African coastline. This fabric occurs in the south of Kharga at Dush[23] and is also common at late Roman sites in the Dakhla Oasis[24] so it is not surprising to find it occurring at Ain Gib and Qasr el-Sumayra.

Very few Nile valley sherds were found. Those that appeared included a few amphorae sherds, their fabric termed M3 under JANINE BOURRIAU's fabric classification system for the Nile valley (personal communication) and a few silt sherds comparable with Nile silt B and C under the Vienna system[25].

The one non-Egyptian amphora fabric identified is the so-called 'N1' amphora, once again referring to JANINE BOURRIAU's fabric classification system (personal communication). This is a very well sorted, fine, dense clay containing medium scatters of sand and calcareous particles. The amphora is distinctive in its shape and manufacture, with a broad bulbous body, round base, two handles joined from the short neck to the shoulder and pronounced ribbing all over the body. It was once thought to be a Nile valley marl amphora but is now recognised as a Mediterranean import which HAYES suggests may be from Cilicia in south-east Turkey or possibly from Cyprus[26].

The Sites

At Ain Gib the pottery scatter was concentrated in two areas over the hill slopes around the fort, one over the east slope and the other over the south-west slope. Each concentration was relatively thick on the ground and a controlled collection was made from both areas. 564 sherds were collected from the east slope of which 87 were diagnostics, *i.e.* 15%. 324 sherds were collected from the south-west slope, of which 39 were diagnostics, *i.e.* 12%.

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[22] The word 'shale' is used here for convenience, being a term that is used commonly in the literature to refer to the large, 'platy' fragments common in oasis pottery. It is not necessarily shale however and may be mudstone or claystone, cf. M.A.J. ECCLESTON, *Early- and Mid-Holocene Ceramics from the Dakhleh Oasis: Macroscopic, Petrographic and Technological Descriptions*, in: R. FRIEDMAN (ed.), *Egypt and Nubia: Gifts of the Desert*, London 2002, footnote 4.

[23] M. RODZIEWICZ, *Introduction à la Céramique à Engobe Rouge de Kharga*, in: *Cahiers de la Céramique Égyptienne* I, Cairo 1987, pp. 123–136.

[24] C.A.H. HOPE, *Pottery Manufacture in the Dakhleh Oasis*, in: C.S. CHURCHER/A.J. MILLS (eds.), *Reports from the Survey of the Dakhleh Oasis 1977–1987*, Oxford 1999, pp. 235–236.

[25] The writer acknowledges that the Vienna System was not devised to incorporate Roman Period fabrics and this reference is given here only to indicate what has been found. The Nile valley fabrics will be incorporated into the fabric system and described fully within the full report of this pottery.

[26] J. HAYES, *Handbook of Mediterranean Roman Pottery*, London 1997, p. 33, pl. 1.

At Qasr el-Sumayra the sherd scatter was concentrated mainly to the south of the fort. The scatter was noticeably thinner than that at Ain Gib and the sherds were much more eroded and broken up. Only one controlled collection was made here. 585 sherds were collected but only 54, or 9% were diagnostics. It is interesting that although the scatter appeared to be thinner at Qasr el-Sumayra, the number of sherds collected was comparable to that from the east slope at Ain Gib, although the number of diagnostics is noticeably less. It is regrettable that the pottery was not weighed as well, which would have provided another means of comparing the pottery between the sites.

The types of vessels found at both sites are extremely similar, something which is to be expected given the forts' proximity to each other and the fact that they appear to be contemporary in date. The shapes represent a range of domestic vessels including small and medium shallow bowls, large deep bowls, standard late Roman globular cooking jars with out-turned rims, necked storage jars, gargoulettes and water kegs.

Dating

All the pottery studied from Ain Gib and Qasr el-Sumayra is Roman in date. No pottery of earlier periods was identified from the surface. The pottery from both sites appears to be contemporary and a date range from the late 3rd century through to the end of the 4th century, possibly extending into the early 5th century AD is suggested. This is based upon comparison with late Roman assemblages from the Nile valley and Dakhla Oasis. The majority of shapes appear to date to the 4th century.

A.D.

Archaeobotanical and Botanical Assessments

There were two aims for the 2002 season of the North Kharga Oasis Survey, firstly, to carry out a preliminary modern vegetation survey and secondly, to assess the archaeobotanical potential of the area.

Modern Vegetation – Preliminary Investigation

In the area of Ain Gib and Qasr el-Sumayra, two areas of vegetation can be distinguished: one of abandoned cultivation – both ancient and modern – and another that follows the underground irrigation systems.

The modern cultivation consists of hollows excavated in the sand, in order to reach the water table. Here watermelons (*Citrullus lanatus*) are grown with varying degrees of success. The vegetation associated with these depressions includes halfa grass (*Imperata cylindrica*) and goat's thorn (*Alhagi maurorum*), which is dominant. Both species are invaluable fodder for domestic animals. Other species include *Cynodon dactylon* and *Hyoscyamus muticus*. Apart from watermelons, date palms (*Phoenix dactylifera*) are also present. The date palm is grown for its fruit and leaves which are used to make baskets. The midribs of the leaves are used in the manufacture of furniture and crates.

Abandoned cultivation (it is difficult to determine if this represents modern or ancient cultivation) can be identified by the presence of date palms. In these areas, drifting sand accumulates around the trunks gradually burying the trees.

Other species associated with these areas include halfa grass, but the dominant plant is the spiny leguminous perennial goat's thorn. In order to reach the water table, the goat's thorn can produce very deep roots which in turn creates a fixed point for the accumulation of drifting sand. The result is hummocks of sand topped by goat's thorn. Species which can be dominant locally include the rush (*Juncus rigidus*) and the grass (*Panicum turgidum*). These can form areas of dense vegetation in places and help to stabilise the drifting sand. In other areas, which tend to have less drifting sand, the dominant species is *Zygophyllum coccineum.*

In some areas, it is possible to trace the underground irrigation systems by a line of dense vegetation. The tree/shrub species present include tamarisk (*Tamarix nilotica*) and the occasional sunt (*Acacia nilotica*), an important fodder source. The lower vegetation layers are dominated by goat's thorn and halfa grass. The halfa grass often appears burnt; this is done by the local population in order to encourage new growth which is then eaten by livestock.

In conclusion, this preliminary botanical survey has shown that there are few plant species in the area and that in general, they are restricted to the new or abandoned cultivation areas and to the path of the underground irrigation systems.

Archaeobotanical Studies

Due to unforeseen circumstances, this season was cut short and therefore the collection and assessment of archaeobotanical material was limited. Those samples collected can be divided into two categories:

1. Mud-bricks

Loose mud-bricks from the fort and the two mud-brick structures further south were collected for the analysis of the plant remains contained within. As mud-bricks were taken from all the structures it may be possible to detect differences in the plant remains used in each building phase. A preliminary study has shown that plant material has been preserved within the mud-bricks. These include twigs of *Tamarix* sp., leaves and fruitstones of olive (*Olea europaea*), fruit stones of date, grain and chaff (mostly straw and articulated rachii) of bread wheat (*Triticum aestivum*), chaff (straw and rachis fragments) of barley (*Hordeum vulgare*) and grape pips (*Vitis vinifera*).

It is most likely that other cultivated and wild plant remains will be identified from the mud-brick when further analysis is carried out. The presence of the cultivated species could suggest that they were grown in the local area at the time of construction. These provided sustenance for the local population, military and travellers visiting the area.

2. Desiccated remains

Sub-surface deposits (less than 10 cm below the surface) were found at South Sumayra. Two deposits were discovered and a total of three samples were taken.

On the south side of the house, a deposit of desiccated remains were found at the base of a mud storage bin at the south-east corner of the building. It appears to consist of a mass of straw and other plant debris. The deposit spreads for approximately 60 cm to the south of the building. The depth of the deposit is unknown. One sample of two bags was taken from the top (closest to the bin) of the deposit and a second (1 bag) was taken from the southern end of the deposit. A second deposit of desiccated material was found at the north-east corner of the building, north of the collapsed wall. The material seems to be in a layer sitting on a sandstone shelf on which the building is located. The deposit has a similar content to that found in the south-east corner.

The antiquity of the material is unknown and whether the two deposits are contemporary also needs to be determined. The source of the material is also difficult to ascertain. There are several possibilities, including the result of crop processing and the degradation of mud-brick. Future studies may help elucidate the origin of deposit.

In conclusion, the area surveyed in 2002 has proved to have some potential for archaeobotanical studies. The analysis of the mud-bricks and the desiccated material may help to determine past agricultural activities in the area.

A.J.C.

Aerial Survey Report

Kite Aerial Photography (k.a.p.) is a useful method for obtaining aerial views of archaeological sites where the normal usage of an aircraft is unfeasible. Aerial photography provides a different perspective on a site, and is particularly useful in setting it into its environment and surroundings, and allowing the archaeologist to study the layout of the site in a way that would be impossible from the ground. Furthermore, many features that are invisible on the ground appear when seen from an aerial perspective, such as the field systems revealed at Sumayra South and Sumayra itself.

The technique used for k.a.p. is not precise, unfortunately, as the kite is very much at the mercy of the elements; however a strategy was developed for optimal results. The camera (Olympus C3030Z digital camera) was attached to the kite string approximately two metres from the kite bridle itself, and operated by radio control. The kite used was a Stratoscoop sparless aerofoil, especially designed for k.a.p. Several images were taken during a single flight. The resulting images were checked in the field, so that more flights, if needed, could be immediately taken. Although imperfect, this method of aerial photography was sufficiently successful to be used in future seasons at the oasis.

R.K.-M.

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Team members: Dr Corinna Rossi (co-director, military architecture), Dr Salima Ikram (co-director, human and animal remains), Amanda Dunsmore (ceramicist), Richard Knisely-Marpole (chief surveyor), Nicholas Warner (architect, domestic architecture). The team was assisted in the field by MAHMOUD MAHDI, Inspector and SAAD FUAD, desert guide, and was helped by IBRAHIM BAHGAT, Chief Inspector.

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Team members: DR SALIMA IKRAM (co-director, mortuary archaeology), DR CORINNA ROSSI (co-director, military architecture), DR ALAN CLAPHAM (archaeobotanist), AMANDA DUNSMORE (ceramicist), RICHARD and ANGELA KNISELY-MARPOLE (chief surveyors), DR ALAN ROWE (routes and ethnography), ILKA SCHACHT (hydraulic specialist), NICHOLAS WARNER (architect, domestic architecture), LESLIE WARDEN, KATHERINE BANDY, HALA SAID and HIROKI ISHIYAMA (surveying assistants). The team was assisted on the field by MAHMOUD MAHDI, Inspector and MUSTAPHA ABD EL-SATTAR, Policeman, and was assisted and supported by IBRAHIM BAHGAT, Chief Inspector.

Abstract

This article contains an overview of the first two seasons of work of the North Kharga Oasis Survey. The survey area includes several archaeological sites at various degrees of preservation. The first season was dedicated to the basic identification and exploration of all sites, whilst the second focussed on the study of Ain Gib and Qasr el-Sumayra. The archaeological remains in the area include the standing remains of small forts, settlements, necropoleis, extensive water systems and traces of ancient cultivations. Theodolite, walking, and aerial survey methods were used to accomplish the aims of the project.

Zwei Statuen der Spätzeit aus der Cachette von Karnak[1]

Von Karl Jansen-Winkeln

(Tafeln 10–13)

1. Ein weiterer Würfelhocker des Amunpriesters Anchpachered Kairo JE 37143 (Taf. 10, 11)

In meiner vor einiger Zeit erschienenen Bearbeitung einiger Statueninschriften der Spätzeit aus dem Museum Kairo habe ich als Nr. 13 den Würfelhocker JE 37129 des *ʿnḫ-pꜣ-ẖrd* veröffentlicht[2]. Dabei war mir entgangen, daß sich im Museum Kairo noch (mindestens) eine weitere bislang unpublizierte Statue desselben Mannes[3] befindet, nämlich der Würfelhocker JE 37143 aus grauem Granit, der gleichfalls aus der Cachette von Karnak stammt (Fundnummer K.443)[4]. Diese zweite Statue erlaubt auch eine genauere Datierung ihres Besitzers.

Die Figur sitzt (ohne Kissen) auf einem rechteckigen Sockel (19,5 cm lang, 14,5 cm breit, 4,3 cm hoch, Gesamthöhe der Statue 33,5 cm), die Füße sind verhüllt, Arme und Beine zeichnen sich deutlich ab, beide Hände liegen flach auf den Knien. Die Perücke ist glatt und läßt die Ohren frei, sie liegt auf dem Rückenpfeiler auf. Der rechte Fuß und der dazugehörige Teil des Sockels sind weggebrochen, außerdem gibt es Ausbrüche an beiden Knien und an mehreren Stellen des Sockels. Die Inschriften sind folgendermaßen verteilt: Um den Sockel läuft eine Zeile, und auf dem Rückenpfeiler steht eine Kolumne. Die anderen Inschriften bilden einen einzigen Text. Er beginnt auf der Vorderseite mit neun Zeilen (davon die beiden letzten nur etwa zur Hälfte erhalten) und setzt sich auf der Oberseite des Sockels fort, zunächst neben dem linken Fuß, dann vor den Füßen (nur der Anfang erhalten), weiter neben dem rechten Fuß (nur eine Gruppe erhalten). Die Kolumne neben dem linken Fuß und die Zeile vor den Füßen sind, wie die Inschrift auf der Vorderseite, zum Betrachter hin ausgerichtet. Dagegen ist die Kolumne neben dem rechten Fuß um 180° gedreht worden und mithin zur Statue ausgerichtet[5]. Der Text setzt sich mit jeweils zwei Zeilen auf dem linken, dann auf dem rechten Arm fort, seine Hieroglyphen blicken alle nach rechts. Für diese eigenartige Disposition einer Inschrift auf einem Würfelhocker ist mir keine Parallele bekannt.

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[1] Ich danke den vormaligen Generaldirektoren des Ägyptischen Museums Kairo, Prof. Dr. M. Saleh und Dr. M.A.H. Shimy, herzlich für ihre Erlaubnis, die beiden Statuen zu veröffentlichen.

[2] K. Jansen-Winkeln, *Biographische und religiöse Inschriften der Spätzeit aus dem Ägyptischen Museum Kairo*, *ÄUAT* 45, 2001, S. 63–7; 360–2; Taf. 27–8 (im folgenden *BRIS* abgekürzt).

[3] Dem auch das Bronzegefäß Kairo Nr. 2911 gehört, vgl. *RecTrav* 7, 1886, S. 119–20, erwähnt in: *BRIS*, 63, n.1.

[4] Erwähnt in: PM II², S. 157 und von H. de Meulenaere, in: *CdE* 68, 1993, S. 49.

[5] Eine ganz ähnliche Richtungsänderung der Inschrift auf der Oberseite des Sockels der unpublizierten Statue Kairo JE 37883bis.

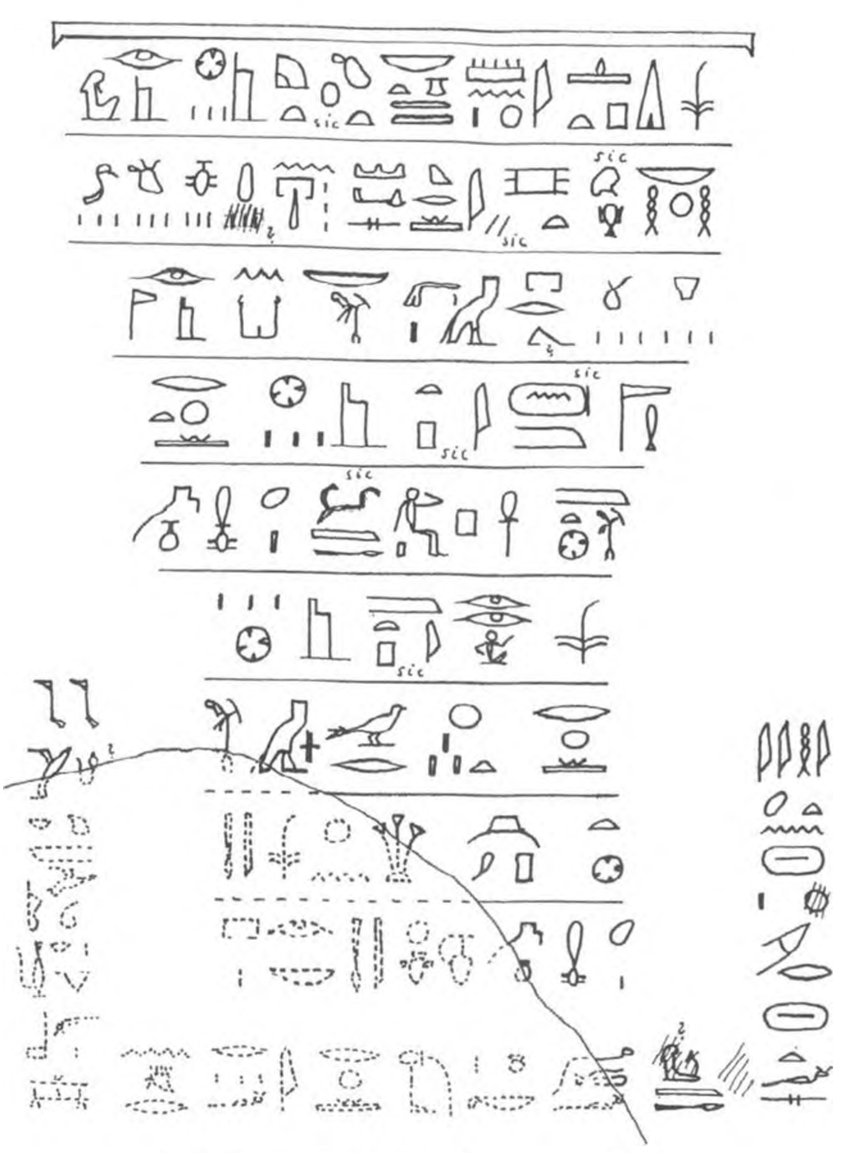

Abb. 1a: Kairo JE 37143, Vorderseite und Oberseite Sockel

Die Statue gehört einem *jtj-nṯr ḥm-nṯr Jmn m Jpt-swt* und *rḫ-ḫt m Wꜣst* namens *ꜥnḫ-pꜣ-ḫrd*. Sein Vater *Kꜣp.f-ḥꜣ-*[ ] ist ihm gleichrangig (*mj-nw*) und führt zudem die Titel bzw. Epitheta *jrtj-njswt m Jpt-swt* und *rḫ-ḫt wr jmj Wꜣst*, seine Mutter ist *jḥyt n Jmn-Rꜥ* (die Bezeichnung *nbt-pr* wohl davor in der Lücke) und heißt *Mrj-Jmn-jtj.s*. Exakt diese Titel und Namen führen auch der Besitzer von JE 37129 (siehe oben) und seine Eltern. Man beachte auch, daß auf beiden Statuen der Besitzer *rḫ-ḫt m Wꜣst* ist, sein Vater aber *rḫ-ḫt wr jmj Wꜣst*, also wohl „größter Gelehrter in Karnak“ (während es sonst immer *rḫ-ḫt wr m Wꜣst* heißt)[6]. Ebenso folgt auf beiden Statuen auf den Titel *jrtj-njswt* des Vaters ein Personendeterminativ, gleichfalls sehr unüblich. Eine weitere Gemeinsamkeit sind die vielfach bizarren

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[6] Vgl. *BRIS*, S. 112 (1).

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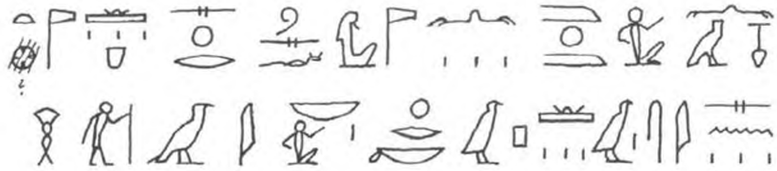

Abb. 1b: Kairo JE 37143, linke Seite, oben

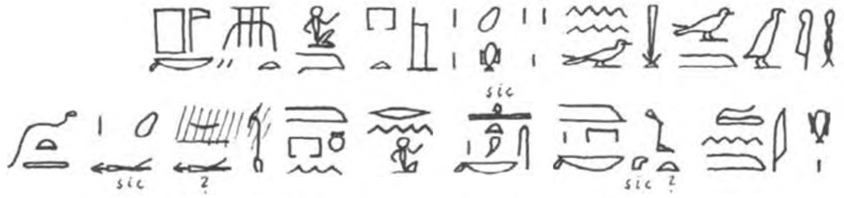

Abb. 1c: Kairo JE 37143, rechte Seite, oben

Schreibungen auf beiden Statuen[7]. Vor allem aber tragen sie weitgehend die gleichen Texte: als Haupttext (auf der Vorderseite) jeweils eine Totenopferformel mit anschließender Biographie, bis auf Kleinigkeiten wortgleich, und auf dem Sockel einen auch sonst mehrfach belegten Verklärungstext[8]. Nur die 'Saitischen Formeln' auf der Rückseite unterscheiden sich beträchtlich (auf JE 37129 außerdem durch einen Verklärungstext erweitert). Insgesamt kann kein Zweifel bestehen, daß beide Statuen ein und demselben Mann gehören, obwohl sie sich in keiner Weise ähnlich sehen und sicher von unterschiedlichen Handwerkern gefertigt worden sind.

Übersetzung

Vorderseite (Abb. 1a):

1 Ein Königsopfer des Amun-Re, des Herrn des Thrones der Beiden Länder, des Ersten von Karnak, des Osiris, 2 des Herrn der Ewigkeit, des Oberhauptes des Nekropolenbezirks, indem sie geben ein Totenopfer, Brot, Bier, Rind, Geflügel, 3 Alabastergefäße und Kleider, was vor den Herrn von Theben kommt für den Ka des Osiris, 4 des Propheten des Amun in Karnak, des Gelehrten 5 in Theben *ꜥnḫ-pꜣ-ẖrd*, gerechtfertigt (1), des Sohnes eines Gleichrangigen, 6 der 'Augen des Königs' in Karnak, 7 des größten Gelehrten in Theben (2) 8 *Kꜣp.f-ḥꜣ-*[*Ḫnzw* (3), gerechtfertigt], 9 des Sohnes des gleichrangigen [*Ḫnm-jb-Rꜥ*, gerechtfertigt, gemacht von der Hausherrin],

(Oberseite des Sockels [Abb. 1a]:)

der Musikerin des Amun *Mrj-Jmn-jtj.s*, gerechtfertigt, indem er sagt (4): [„Ich war ein Wab-Priester, der seine Pflichten kennt, der dem Weg seines Gottes folgt, gemessenen Schrittes, frei von Über]eilung der Füße (5).

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[7] Zu JE 37129 vgl. *BRIS*, S. 66–7, Anm. 1; 2; 3; 7; 12; 14; 17; zu JE 37143 vgl. Vorderseite, Z.1; 2; 4; 5; 6; Rückseite; rechte Seite, Z.2.

[8] Vgl. dazu H. de Meulenaere, in: *CdE* 68, 1993, S. 49 (k); Assmann, *Basa*, S. 73–4.

(linke Seite, oben [Abb. 1b]:)

1 Ich gesellte mich nicht zu Leuten, die Gott ignorieren, die die Pläne ihres Stadtgottes (?) nicht beachten (6). 2 Der Lohn durch dich, mein Herr, ist ein dauerndes Alter,

(rechte Seite, oben [Abb. 1c]:)

1 frei von Kummer, indem (mein) Sohn auf meinem Platz ist an der Spitze deines Tempels (7), 2 indem er (meine) Laufbahn übernimmt in deinem Haus, so daß mein Name nicht vergeht in Theben (8) in ununterbrochener Generationenfolge auf ewig.

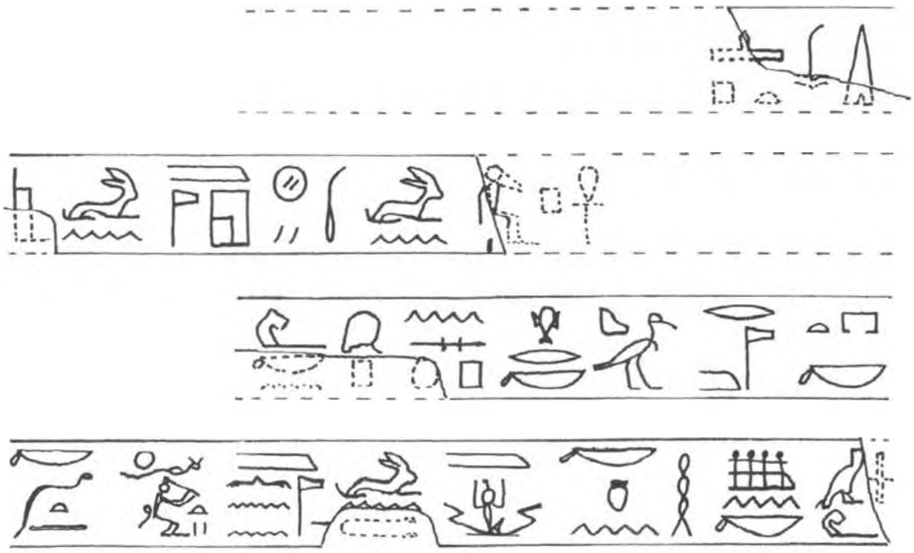


Abb. 2: Kairo JE 37143, um den Sockel

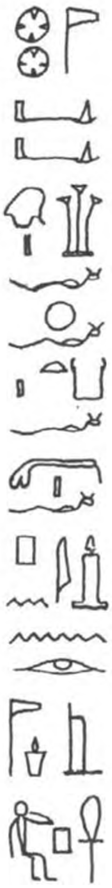


Abb. 3: Kairo JE 37143, Rückseite

Um den Sockel (Abb. 2):

Ein Königsopfer [... *ʿnḫ-pꜣ-ḫr*]*d* (9): Sei, sei im Tempel; möge dein Platz neben dem Gott sein! Dein Ba (10) der ersten Urzeit ist bei dir und [dein] Herz von ehedem. Empfange dir Lobpreis in der 'Barke der Millionen'! Mögest du als Gott existieren (11), ohne daß du einen Feind hast ewig.

Rückseite (Abb. 3):

Der Stadtgott ist hinter ihn gesetzt worden, gegenüber seinem Ka, in seine Gegenwart. Er ist ein mit einem (solchen) Pfeiler Versehener, der Osiris (12), der Gottesvater *ʿnḫ-pꜣ-ḫrd*.

Anmerkungen

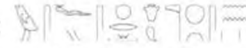
(1) Das Zeichen über *m3ˁ-ḫrw* ist sehr merkwürdig, ein (zusätzliches) (o.ä.) wäre bei einem Mann nicht zu erwarten. Es kann eigentlich nur ein sehr entstelltes Personendeterminativ sein.

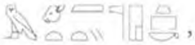
(2) Wohl eher so als „großer Gelehrter, der in Theben ist"; vgl. auch *BRIS*, 66 (4); 112 (1).

(3) So auch der Name des Vaters in der Sockelinschrift von JE 37129 (*BRIS*, 362), während er dort auf der Vorder- und Rückseite (*ibid.*, 360–1) *K3p.f-n-ḥ3-Ḫnzw* heißt.

(4) Vgl. zur folgenden Ergänzung *BRIS*, 360, b,6–8. Die einzelnen Schreibungen lassen sich natürlich nicht exakt rekonstruieren.

(5) Zu dieser seltenen Phrase vgl. *BRIS*, 66 (7). Ein weiterer Beleg auf der unpublizierten Statue London BM 37922 aus der 26. Dynastie (?): *šm.j ḥr w3t n ḥnwt.j n t3 rdwj(.j) m nwt.s* „ich ging auf dem Weg meiner Herrin [Neith], ohne daß (meine) Füße sich übereilten in ihrer Stadt".

(6) JE 37129 (Vorderseite, Z.9–10) hat . Vermutlich ist die Stelle in der gemeinsamen Vorlage mißverstanden worden, oder sie war dort schon verderbt überliefert. Gemeint sein könnte *wsf sḫrw nw* (bzw.) *nṯr-nwtj.sn*. Die Übersetzung und Erklärung in *BRIS*, 65; 67 (9) ist jedenfalls zu korrigieren.

(7) JE 37129 (Vorderseite, Z.12) hat statt dessen , also *m-ḫnt m3ˁtj(w) ḥwt-nṯr.k*, aber vermutlich ist nur durch eine Verlesung aus einem Komplement zu *ḫntj* entstanden.

(8) Über *n* (=*m*) *wˁ* muß ein Determinativ von *W3st* gestanden haben, aber die Spur paßt nicht zu oder .

(9) Vgl. zum Folgenden die Angaben in *BRIS*, 67 (14).

(10) Der partielle Zusammenfall von *k* und *q/g* im nachklassischen Ägyptisch ist zwar wohlbekannt (siehe J. Osing, in: *LÄ* III, 946), die Schreibung des Suffixes *.k* durch ist aber m.W. einmalig.

(11) Links neben der Bruchstelle ist unter noch der Rest eines Zeichens, der nicht zu gehören kann. Vielleicht war auch hier die Vorlage verderbt, denn JE 37129 hat an dieser Stelle gleichfalls eine merkwürdige Variante, siehe *BRIS*, 67 (17); 362.

(12) Gemeint sein kann nur *jwny pw* mit folgender Apposition *Wsjr* NN.

Wenn die beiden Statuen Kairo JE 37129 und JE 37143 denselben Mann darstellen, stellt sich die Frage der Datierung neu. Für JE 37129 war, wenn auch mit Vorbehalt, ein Ansatz in die 27. Dynastie vorgeschlagen worden, und zwar allgemein aufgrund ihres Aussehens, das entfernt an Würfelhocker der 26. Dynastie erinnerte, und im besonderen aufgrund des Namens *Ḫnm-jb-Rˁ* (Thronname des Amasis) des Großvaters des Besitzers[9]. Das läßt sich nun nicht mehr halten. Die besondere Form der 'Saitischen Formel' auf JE 37143 ist typisch für die 30. Dynastie bzw. die frühe Ptolemäerzeit, wie H. de Meulenaere gezeigt hat[10], und auch das ganze Erscheinungsbild der Statue spricht sicherlich für einen solch späteren Ansatz, ebenso die Merkwürdigkeiten der Orthographie (auf beiden Statuen). Für JE 37129 darf man vielleicht annehmen, daß man eine Annäherung an Vorbilder der 26. Dynastie versucht hat, wie das ja für die 30. Dynastie nicht untypisch ist[11].

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[9] *BRIS*, S. 64.

[10] *CdE* 68, 1993, S. 63–4.

[11] Vgl. *ibid.*, S. 61–3; Bothmer, *Egyptian Sculpture*, XXXVII, S. 89ff.; *LÄ* IV, 451, oben; Cl. Vandersleyen (ed.), *Das Alte Ägypten, Propyläen Kunstgeschichte*, Bd. 17, Berlin 1985, S. 261–2.

Statuen derselben Person mit (fast) den gleichen Texten finden sich in der Spätzeit auch sonst gelegentlich[12]. Ebenfalls aus der Cachette von Karnak sind die Würfelhocker Kairo JE 36971 und 36998[13]. Sie gehören einem Priester und Handwerker namens *Ns-pꜣ-sfj* und wurden von verschiedenen Söhnen gestiftet, die sie mit fast identischen Reliefs und Inschriften dekorieren ließen. Auch zwei Würfelhocker des Harwa, Obervermögensverwalters der Gottesgemahlin Amenirdis (I.), Louvre A 84 und Berlin 8163[14], tragen weitgehend die gleichen Inschriften. Was die Auftraggeber solcher 'Statuenpaare' dazu veranlaßte, im gleichen Tempel mehrere Statuen mit denselben Texten aufstellen zu lassen, ist kaum zu erkennen. Vermutlich waren solche Statuen an verschiedenen Orten aufgestellt, damit ein und dieselbe Person bei unterschiedlichen Gelegenheiten am Kult teilnehmen konnte. Vielleicht hat man dann jeweils andere Handwerker mit der Anfertigung der Statuen beauftragt, es stand aber nur eine Textvorlage zur Verfügung. Wie auch immer, die Gründe lassen sich nicht ermitteln, die Tatsache selbst zeigt aber, daß Originalität der Dekoration und der Texte kein besonders wesentliches Kriterium war.

2. Der Würfelhocker Kairo JE 37847 (Taf. 12, 13)

Die Figur ist aus Granit und stammt aus der Cachette von Karnak (Fundnummer K.566). Sie sitzt auf einem Sockel (24,6 cm lang, 19,4 cm breit, 7–8 cm hoch; Gesamthöhe der Statue 38,8 cm) mit einer Stufe im hinteren Bereich. Die Füße sind nicht frei, die linke Hand liegt flach auf dem Knie, die rechte hält eine Pflanze. Die Perücke ist glatt und ziemlich breit, sie läßt die Ohren frei und liegt auf dem Rückenpfeiler auf. Die Statue ist gut erhalten; nur am rechten Knie ist ein Stück ausgebrochen, und der Sockel hat eine Reihe von Abbrüchen und Beschädigungen.

Um das Gewand laufen sieben Zeilen. Die erste beginnt in der Mitte der Vorderseite und setzt sich symmetrisch nach beiden Seiten fort. Allerdings endet die um die linke Körperseite laufende Hälfte unvermittelt vor dem Rückenpfeiler, während die um die rechte Seite laufende (mit nach rechts blickenden Hieroglyphen) sich in Z.2–7 fortsetzt[15]. Auf den Füßen (unmittelbar unter der siebten Zeile) ist eine Inschrift von fünf Kolumnen, auf dem Rückenpfeiler eine mit vier Kolumnen, der Sockel ist unbeschriftet.

Die Statue ist unpubliziert, wird aber in der Literatur einigemal erwähnt[16]: A. von Lieven hat einen der zahlreichen Titel des Besitzers besprochen[17], und H. de Meulenaere[18] und ich selbst[19] haben sie anläßlich einer bestimmten Art der 'Saitischen Formel' auf dem Rückenpfeiler angeführt. Der besonderen Form dieser Formel entsprechend sollte sie in die 30. Dynastie oder die frühe Ptolemäerzeit gehören[20], und in diese Zeit paßt sie auch dem gesamten Eindruck nach.

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[12] Vgl. etwa H. de Meulenaere, in: *Fs* Mokhtar, I, S. 189–93 zu den Statuen(fragmenten) Berlin 8171 und Durham 509 eines Mannes aus Mendes.

[13] *BRIS*, S. 23–33; 337–45; Taf. 9–14.

[14] B. Gunn/R. Engelbach, in: *BIFAO* 30, 1931, S. 793. 802–10, Pl. VI; B. Gunn, in: *BIFAO* 34, 1934, S. 135–9.

[15] Vgl. einen ähnlichen Fall in *BRIS*, 391 (e); 132; 134 (16).

[16] Vgl. auch PM II², S. 159.

[17] *ZÄS* 128, 2001, S. 62–3.

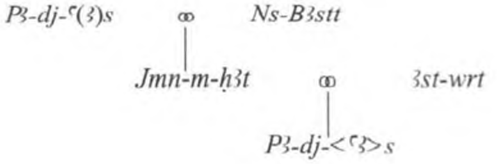
[18] *CdE* 68, 1993, S. 64, n.21.

[19] *SAK* 28, 2000, S. 114; 122 (Nr. 128).

[20] *CdE* 68, 1993, S. 63–4.

Besitzer:	
Jmn-m-ḥꜣt	*jtj-nṯr ḥm(-nṯr) Jmn m Jpt-swt* *ḥm ḥḏt (ḥm) Ḥr wr wꜣḏtj* und weitere 36 Titel als Priester und Tempelbeamter, siehe unten.
Vater:	
Pꜣ-dj-ꜥ(ꜣ)s	*(mj-nn)* *ḥm-nṯr*
Mutter:	
Ns-Bꜣstt	*nbt-pr* *jḥyt Jmn-Rꜥ*
Ehefrau:	
ꜣst-wrt	*nbt-pr* *jḥyt Jmn-Rꜥ*
Sohn:	
Pꜣ-dj-<ꜥꜣ>s	---

Das ergibt folgenden Stammbaum:



Übersetzung

a) Um das Gewand (Abb. 4):

1 (links:) Ein Königsopfer des Amun-Re, des Urzeitlichen der Beiden Länder, mit heiligem Arm, der das Seiende gemacht hat (1), der das Existierende erschaffen hat, indem er gibt tausendfach Brot, Bier, Wein, Milch [Ende des Textes (?)] (2).

(rechts:) Ein Königsopfer des Amun-Re, [des Herrn der Throne der Beiden Länder, des Ersten] von Karnak, indem er gibt ein Totenopfer, Brot, Bier, Rind, Geflügel, alle guten und reinen Dinge {für den Ka} 2 für den Ka des Osiris, des Gottesvaters und Propheten des Amun in Karnak, des 'Dieners der Weißen' und (Dieners) des Horus, des Großen der Beiden Diademe (3), des Beauftragten des Hauses des Amenope in der 4. Phyle, des Schreibers des Gottesschatzes in der 4. Phyle, des *jrj-šn* in der 3. und der 4. Phyle (4), des diensttuenden (Priesters) in der 3. Phyle (5), des Schreibers des *šn* in 3 der 1. und der 4. Phyle (6), des Wächters in der 3. und 4. Phyle (7), des Wab-Priesters des Mittelsaals in der 3. Phyle (8), des Küchenmeisters in der 3. und 4. Phyle (9), des Großen der Wab-Priester in der 4. Phyle (10), des ? (11) und (?) Wab-Priesters des Amenope in der 1. und 3. Phyle, des Vorstehers der Bäckerei (12) in der 3. Phyle, des Schreibers des Opfertisches der 3. Phyle, 4 des Wab-Priesters des Osiris zu Gast in Luxor der 4 Phylen (13), des Propheten und Wab-Priesters der Isis, der Verlassenen (?) auf dem Weg, in der 3. Phyle (14), des Propheten im Monatsdienst des Chons und des Amenope in der 3. Phyle (15), des Propheten der Isis vom Gartenhaus (16), des Propheten des Amenope 'Der Helfer' (17), des Propheten 5 des Amenope 'Mit schönem Gesicht' (18), des Propheten des Amun, des Herrn des Thrones der Beiden Länder 'Der Helfer' (19), des Propheten des Amenope 'Der auf dem Großen Sitz ist' (20), des Propheten der Isis, der Herrin der Grünpflanzen (21), des Propheten des Re vom Dach des Hauses des

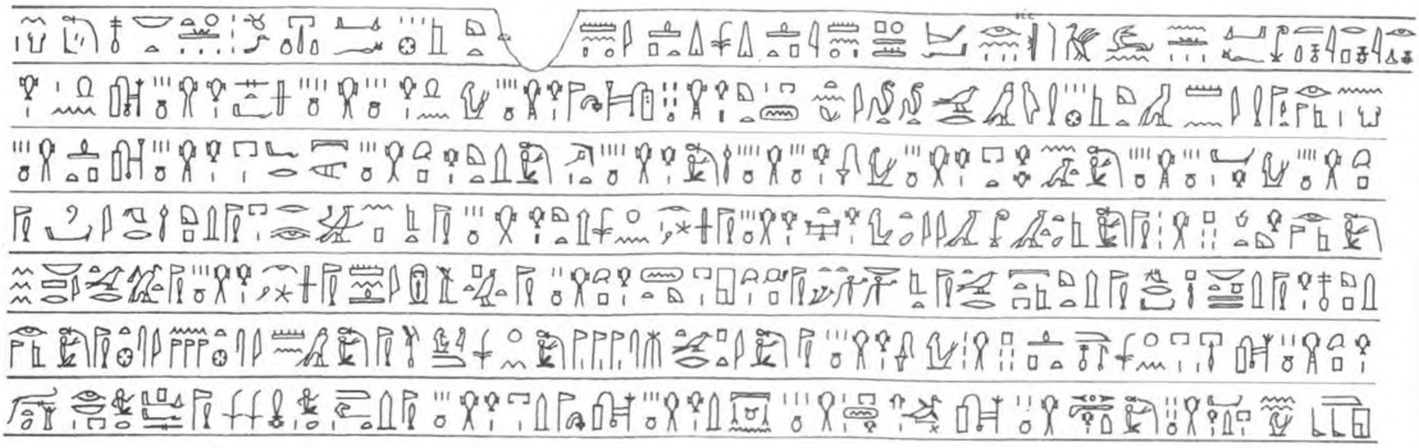


Abb. 4: Kairo JE 37847, um das Gewand

Amenope in der 1. und 2. Phyle (22), des Propheten der Statue des Pharao Amenhotep (23), des Propheten im Monatsdienst in der 3. Phyle, des Propheten der Mut, der Großen, der Herrin von *Jšrw* 6 in der 1. und 2. Phyle, des königlichen Schreibers (24) des Hauses des Chons in Theben, Neferhotep, der 4 Phylen, des Küchenmeisters in der 3. Phyle (25), des Propheten und Wab-Priesters der *Jpt*, der Großen, die die Götter geboren hat, des Wab-Priesters des Chons-Schu in Theben, des Propheten und Wab-Priesters des Horus von *Mn-jst* und der Götter von <*Mn*-(?)>*Jst* (26), des Propheten und Wab-Priesters des Osiris 7 im Hause des Benben (27), des Wächters des Hauses des Amun in der 4. Phyle (28), des Wab-Priesters des Min-Amun in der 2. Phyle, des *ṯꜣ*-Schreibers des Hauses des Amun in der 3. Phyle (29), des Obersten der Kleider des Amun in der 3. Phyle (30), des Schreibers des Gottesschatzes des Hauses des Amun in der 3. Phyle (31), des Propheten *Jmn-m-ḥꜣt*, des Sohnes des gleichrangigen Propheten *Pꜣ-dj-ʿ(ꜣ)s* (32), gemacht von der Hausherrin *Ns-Bꜣstt*.

b) Auf den Füßen (Abb. 5):

1 Gemacht von seinem Sohn, um am Leben zu erhalten 2 seinen Namen auf Erden, (dem) *Pꜣ-dj-(ʿꜣ)s* (32), 3 dem Sohn des Gottesvaters und Propheten des Amun in Karnak, 4 *Jmn-m-ḥꜣt*, gerechtfertigt, 5 gemacht von der Hausherrin und Musikerin des Amun-Re *ꜣst-wrt*.

c) Rückseite (Abb. 6):

1 Der Stadtgott ist hinter ihn gegeben worden (33), den Gottesvater und Propheten des Amun in Karnak, den Diener der 'Weißen', (Diener) des Horus, des Großen der Beiden Diademe (3), den Schreiber des Gottesschatzes 2 des Amun *Jmn-m-ḥꜣt*, gerechtfertigt, den Sohn des gleichrangigen *Pꜣ-dj-ʿ(ꜣ)s* (32), gerechtfertigt, gemacht von der Hausherrin und Musikerin des Amun-Re *Ns-Bꜣstt*, gerechtfertigt, indem er sagt: 3 „O die (ihr) eintretet bei Amun (34) in der großen Stadt (35), die an dieser Statue vorbeigehen werden, möget ihr dauern 4 in Gunst beim Gott und in Gunst beim Herrn der Beiden Länder, so wie ihr sprecht ein *ḥtp-dj-njswt* für den Herrn dieser Statue."

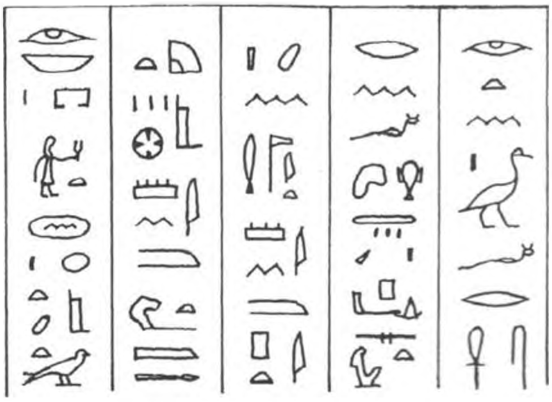


Abb. 5: Kairo JE 37847, auf den Füßen

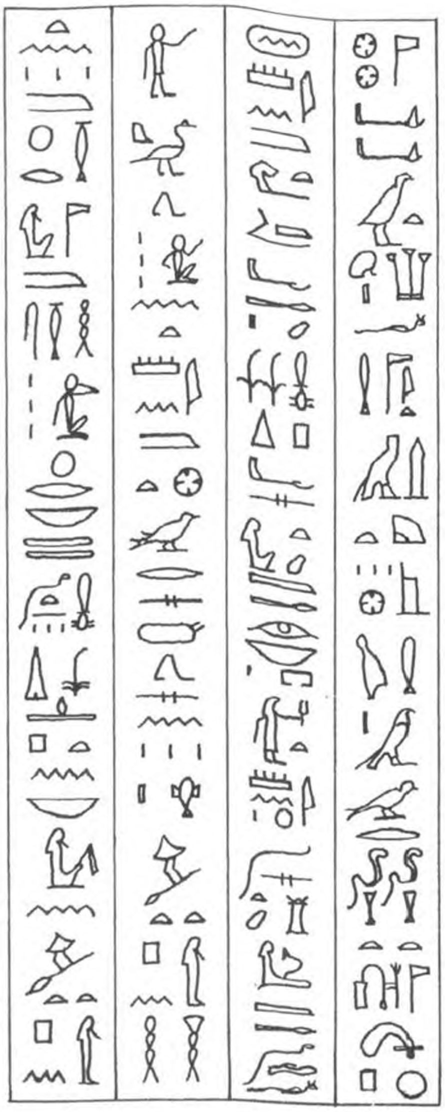


Abb. 6: Kairo JE 37847, Rückenpfeiler

Anmerkungen

(1) *jrj n<tt>*.

(2) Es wäre möglich, daß sich der Text in Z.2 in umgekehrter Leserichtung fortsetzt (d.h. die rechte Hälfte von Z.1 und Z.2 wären *bustrophedon* zu lesen), also ganz folgerichtig durch *n k3 n* fortgesetzt wird. In diesem Fall wäre das erste *n k3 n* am Ende von Z.1 zu streichen, falls nicht, handelt es sich um eine Dittographie beim Zeilenwechsel, dann wäre das zweite *n k3 n* überflüssig.

(3) Vgl. zu dieser Titelfolge H. de Meulenaere, in: *CdE* 57, 1982, S. 229–30; H.-J. Thissen, *Die demotischen Graffiti von Medinet Habu, Dem. Stud.* 10, Sommerhausen 1989, S. 25–6; C. Traunecker, in: W. Clarysse et al. (eds.), *Egyptian Religion. The Last Thousand Years. Studies Dedicated to the Memory of Jan Quaegebeur*, II, *OLA* 85, Löwen 1998, S. 1215ff.

(4) Zum Titel *jrj šn* vgl. H. de Meulenaere, in: *CdE* 68, 1993, S. 57 (b). Hier und im folgenden wird, wenn der Dienst in zwei Phylen betroffen ist, das Wort *zꜣ* „Phyle“ jeweils zwischen die beiden Ordinalzahlen gestellt.

(5) Zur Schreibung von *jmj-st-ꜥ* siehe *BRIS*, 55 (6).

(6) Vgl. zu diesem Titel G. Vittmann, *Der demotische Papyrus Rylands* 9, *ÄUAT* 38, Wiesbaden 1998, S. 588–9.

(7) Vgl. *Wb* III, 418,2. In Z.7 wird derselbe Mann *zꜣw pr Jmn ḥr zꜣ* 4*-nw* genannt. Inwieweit dies ein separater Titel sein soll, ist schwer zu sagen.

(8) Vgl. *BRIS*, 56 (9).

(9) Vgl. *BRIS*, 56 (7). In Z.6 erscheint erneut (bei derselben Person) der Titel *jrj-ps ḥr zꜣ* 3*-nw*.

(10) Zu *ꜥꜣ wꜥb* vgl. J. Quaegebeur, in: *RdE* 45, 1994, S. 168–9.

(11) Die Hieroglyphe ist mir nicht bekannt. Auch eine hieratische oder demotische Form scheint es nicht zu sein.

(12) Vgl. *BRIS*, 56–7 (12).

(13) *wꜥb Wsjr ḥrj-jb Jpt pꜣ* 4 *zꜣw*. Zur Schreibung von *ḥrj-jb* vgl. *Wb* III, 137. Das steht hier aber kaum für *jb*, wie bei F. Daumas, *Valeurs phonétiques des signes hiéroglyphiques d'époque gréco-romaine*, IV, Montpellier 1995, S. 780 angegeben, sondern für *b*, vgl. Fecht, *Wortakzent*, § 126.

(14) Sehr unsicher, vielleicht ist *ẖꜣyt* eine Schreibung für *ẖꜣꜥyt* „Verlassene“ (entsprechend bohairisch **ϧⲁⲓⲏ**, siehe Osing, *Nominalbildung*, 238). Auslassung des *ꜥ* in der Wurzel *ẖꜣꜥ* ist in der Spätzeit gelegentlich belegt, zumindest in Personennamen, vgl. M. Thirion, in: *RdE* 39, 1988, S. 142; *BRIS*, 356/357; 57 (17). Nicht ganz auszuschließen ist aber auch, daß es sich um eine Schreibung von *ẖꜣrt* „Witwe“ handelt.

(15) Zur Verbindung von Chons und Amenope in Priestertiteln vgl. die Angaben von J. Quaegebeur, in: S.P. Vleeming (ed.), *Hundred-Gated Thebes. Acts of a Colloquium on Thebes and the Theban Area in the Graeco-Roman Period, Papyrologica Lugduno-Batava* 27, Leiden/New York/Köln 1995, S. 147, n.51 sowie *BRIS*, 357, c; 417, c,2; 418, d,1.

(16) Zu *mꜣrw* vgl. *Wb* II, 30; *CoA*, I, 156–8; P. Wilson, *A Ptolemaic Lexicon*, *OLA* 78, Löwen 1997, S. 404–5. Ein *mꜣrw* der Isis scheint bis jetzt allerdings nicht bekannt zu sein.

(17) Vgl. dazu P. Vernus, in: *Hommages Sauneron*, I, 463–76, v.a. Beleg 4.

(18) Derselbe Titel auch auf der demotisch beschriebenen Bronzetafel London BM 57371, vgl. F. Shore, in: *Fs* Fairman, 146/147, Z.20 und A. Farid, *Die demotischen Inschriften der Strategen*, San Antonio 1993, S. 23 (Nr. 39, Z.20).

(19) Vernus (siehe oben, Anm. 17) zitiert zwar einige Fälle für *Jmn pꜣ ꜥḏr* und einen für *Jmn-Jpt pꜣ ꜥḏr*, aber keinen *Jmn nb nst tꜣwj pꜣ ꜥḏr*. Vielleicht dient das *nb nst tꜣwj* hier nur dazu, den *Jmn pꜣ ꜥḏr* von dem zuvor genannten *Jmn-Jpt pꜣ ꜥḏr* zu unterscheiden.

(20) Der gleiche Titel auch auf der Statue Kairo JE 38061, vgl. *BRIS*, 356; 57 (14). Zum Gottesbeiwort *ḥrj st wrt* vgl. allgemein Ch. Leitz (ed.), *Lexikon der ägyptischen Götter und Götterbezeichnungen* V, *OLA* 114, 2002, S. 375–6.

(21) Ein entsprechender Titel scheint sonst nicht bekannt zu sein. Zu *ꜣst nbt wꜣḏwꜣḏ* siehe *Dendara* III, S. 25,4–5; S. Cauville, *Dendara. La porte d'Isis*, Kairo 1999, S. 56,15–57,1 und allgemein Ch. Leitz (ed.), *Lexikon der ägyptischen Götter und Götterbezeichnungen* IV, *OLA* 113, 2002, S. 38. Zu Isis als 'Feldgöttin' siehe Münster, *Isis*, S. 198; *RÄRG*, S. 328; S. Herrmann, in: *ZÄS* 82, 1957, S. 51–2.

(22) Ein bekanntes Re-Heiligtum gibt es auf dem Dach des Tempels von Karnak, siehe H. Kees, in: *OrNS* 18, 1949, S. 427–42; H. Ernst, in: *GM* 176, 2000, S. 53–7 und die Angaben S. 53, n.6. In späterer Zeit muß es also eine entsprechende Einrichtung in Luxor gegeben haben.

(23) Offenbar einer der beiden spätesten Belege für den Kult Amenophis' I., siehe A. von Lieven, in: *ZÄS* 128, 2001, S. 62–3.

(24) *zš pr-ꜥꜣ* statt des üblichen *zš njswt* ist bemerkenswert.

(25) Siehe oben, Anm. 9.

(26) Zu *Mn-jst* siehe Ch. van Siclen, in: *Serapis* 6, 1980, S. 183–207 und zuletzt A.-C. Thiem, in: *GM* 175, 2000, S. 79–80. Der Kultbetrieb dort ist also entweder nicht schon in der 21. Dynastie erloschen (so M. Gitton, *L'épouse du dieu Ahmes Néfertary*, Besançon/Paris 1975, S. 91; vgl. E. Graefe, in: *BiOr* 33, 1976, S. 319) oder in späterer Zeit wiederaufgenommen worden. Aus dem Neuen Reich ist dort (neben Ahmes-Nefertari und Amenophis I.) nur ein Kult des Amun bezeugt, keiner des Horus oder anderer Götter.

(27) Ein *ḥm-nṯr Wsjr m Ḥwt-Bnbnt* namens *Pꜣ-ẖꜣrw-H̱nzw* findet sich auch auf einem Bronzegefäß im Louvre (siehe P. Pierret, *Recueil d'inscriptions inédites du Musée égyptien du Louvre*, II, Paris 1878, S. 121) und auf der Statue Kairo JE 38016 (siehe H. Selim, in: *MDAIK* 56, 2000, S. 367). Mit *Ḥwt-Bnbnt* ist vermutlich der Chonstempel gemeint, vgl. *ibid.*, 368 (B).

(28) Siehe oben, Anm. 7.

(29) Vgl. die Angaben in *BRIS*, 17 (2).

(30) Vgl. den Titel *ḥrj mnẖt n pr Jmn*, siehe R.A. Parker, *A Saite Oracle Papyrus from Thebes*, *Brown Egyptological Studies* 4, Providence 1962, Pl. 11 (Z.11); S. 24 (Nr. 34a); S. 25; 32–3; K. Jansen-Winkeln, *Ägyptische Biographien der 22. und 23. Dynastie*, *ÄUAT* 8, Wiesbaden 1985, S. 175–6 (5).

(31) In Z.2 wird er *zš ẖtmt-nṯr ḥr zꜣ 4-nw* genannt; sollte sich das nicht auf das *pr Jmn* beziehen?

(32) Vgl. Ranke, *PN* I, S. 122,19; II, S. 355. In seiner Bearbeitung der Stele London BM 8456 versteht M.L. Bierbrier diesen Namen als eine Kurzform von *Pꜣ-dj-ꜥstrt*, siehe Id., *Hieroglyphic Texts from Egyptian Stelae etc.*, Part 11, London 1987, S. 34. Der Name ist mehrfach auf Statuen nachsaitischer Zeit aus der Cachette von Karnak belegt, siehe *PM* II^2, S. 156 (Kairo JE 36989); S. 157 (JE 37142; JE 37173).

(33) Vgl. zu dieser Variante der 'Saitischen Formel' H. de Meulenaere, in: *CdE* 68, 1993, S. 63–4; K. Jansen-Winkeln, in: *SAK* 28, 2000, S. 98.

(34) Wörtlich „Eintretende des Amun", vgl. K. Jansen-Winkeln, *Spätmittelägyptische Grammatik*, *ÄUAT* 34, Wiesbaden 1996, § 390.

(35) Damit wird Theben gemeint sein, vgl. Jansen-Winkeln, *Ägyptische Biographien*, S. 159; 523 (Z.5).

Das Bemerkenswerteste an den Inschriften dieses Objekts ist zweifellos die große Anzahl von Titeln, die sich sein Besitzer beilegt; fast der gesamte Text auf dem Gewand besteht aus dieser Titelreihe. Ähnliche Titelanhäufungen finden sich auch auf einigen anderen Statuen dieser Zeit aus der Cachette von Karnak, z.B. auf dem Naophor Kairo JE 37138 und auf der Stehfigur Kairo JE 36714 des *Ns-Mnw* (beide unpubliziert); vgl. auch den Osirophor Kairo JE 38061 des *Jw.f-ꜥꜣw* aus etwas früherer Zeit[21]. Die Titel des *Jmn-m-ḥꜣt* lassen sich vielleicht folgendermaßen einteilen:

1) Haupttitel/Priesterrang:
jtj-nṯr ḥm(-nṯr) Jmn m Jpt-swt
ḥm ḥḏt (ḥm) Ḥr wr wꜣḏtj

2) Priestertitel der thebanischen Hauptgötter:
ḥm-nṯr jmj-ꜣbd.f H̱nzw Jmn-Jpt ḥr zꜣ 3-nw
ḥm-nṯr Mwt wrt nbt Jšrw ḥr <zꜣ> tpj zꜣ 2-nw

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[21] *BRIS*, S. 52–3.

?? wꜥb Jmn-Jpt ḥr <zꜣ> tpj zꜣ 3-nw
ḥm-nṯr Rꜥ tp-ḥwt pr Jmn-Jpt ḥr <zꜣ> tpj zꜣ 2-nw

3) Priestertitel ohne Bezug auf einen Gott:
ḥm-nṯr jmj-ꜣbd.f ḥr zꜣ 3-nw
jmj-st-ꜥ ḥr zꜣ 3-nw
ꜥꜣ wꜥb ḥr zꜣ 4-nw
wꜥb n tꜣ ḥrjt-jb ḥr zꜣ 3-nw

4) Titel der Tempelverwaltung der thebanischen Hauptgötter:
zš ḫtmt-nṯr pr-Jmn ḥr zꜣ 3-nw
zš ṯꜣ pr Jmn ḥr zꜣ 3-nw
zꜣw pr Jmn ḥr zꜣ 4-nw
jdnw pr Jmn-Jpt ḥr zꜣ 4-nw
ḥrj mnḫt n Jmn ḥr zꜣ 3-nw
zš pr-ꜥꜣ pr Ḫnzw m Wꜣst Nfr-ḥtp pꜣ 4 zꜣw

5) Titel der Tempelverwaltung ohne Bezug auf einen Gott:
zš ḫtmt-nṯr ḥr zꜣ 4-nw
zš ḥtp zꜣ 3-nw
zš šn ḥr <zꜣ> tpj zꜣ 4-nw
jrj šn ḥr <zꜣ> 3-nw zꜣ 4-nw
zꜣw ḥr <zꜣ> 3-nw zꜣ 4-nw
jrj-ps ḥr <zꜣ> 3-nw zꜣ 4-nw
jrj-ps ḥr zꜣ 3-nw
ḥrj ꜥmrw ḥr zꜣ 3-nw

6) Priestertitel spezifischer Kultformen:
ḥm-nṯr wꜥb ꜣst tꜣ ḫꜣyt ḥr wꜣt ḥr zꜣ 3-nw
ḥm-nṯr ꜣst n pꜣ mꜣrw
ḥm-nṯr ꜣst nb(t) wꜣḏwꜣḏ
ḥm-nṯr wꜥb Wsjr m Ḥwt-Bnbnt
ḥm-nṯr Jmn nb nst tꜣwj pꜣ ꜥḏr
ḥm-nṯr Jmn-Jpt pꜣ ꜥḏr
ḥm-nṯr Jmn-Jpt Nfr-ḥr
ḥm-nṯr Jmn-Jpt ḥrj st wrt
ḥm-nṯr pꜣ twt pr-ꜥꜣ Jmn-ḥtp
ḥm-nṯr wꜥb Ḥr Mn-jst n nṯrw <Mn->jst
ḥm-nṯr wꜥb Jpt wrt msj nṯrw
wꜥb Ḫnzw-Šw m Wꜣst
wꜥb Mnw-Jmn ḥr zꜣ 2-nw
wꜥb Wsjr ḥrj-jb Jpt pꜣ 4 zꜣw

Die beiden unter 1 angeführten Titel stehen in Inschrift a und c an erster Stelle; sie werden daher seine wichtigsten Titel sein bzw. seinen Rang in der Hierarchie angeben. Daneben führt er nur einige wenige Priestertitel der thebanischen Hauptgottheiten (2), aber diejenigen ohne ausdrücklichen Gottesbezug (3) werden sicher ebenfalls Kulte in den Hauptheiligtümern betreffen. Ähnliches gilt für die Titel der Tempelverwaltung: Sie sind entweder ausdrücklich auf Einrichtungen der thebanischen Hauptgottheiten bezogen (4) oder es ist kein Bezug angegeben (5), und in diesem Fall werden wiederum diese Hauptheiligtümer gemeint sein. Alle Titel der Gruppen 2–5 sind auf bestimmte Phylen beschränkt. Die letzte Gruppe dagegen, die Priestertitel ganz spezifischer (und meist selten belegter) thebanischer Kultformen werden nur in zwei Fällen auf bestimmte Phylen beschränkt (und haben einmal den Zusatz *pꜣ 4 zꜣw*).

Es ergibt sich folgender Eindruck für den Verantwortungsbereich des *Jmn-m-ḥꜣt*: Seine Priestertätigkeit in den thebanischen Hauptheiligtümern war eher untergeordneter Art und auf bestimmte Phylen beschränkt. Dagegen hatte er vielfältige Funktionen in der Tempelverwaltung der Hauptheiligtümer, wenn auch keine höchsten Positionen. Alle Tätigkeiten sind auch hier auf bestimmte Phylen begrenzt, und sie scheinen sich einigemal zu überschneiden; möglicherweise sind bestimmte Funktionen mehrfach genannt. Auffällig ist, daß er für so zahlreiche kleine Nebenkulte zuständig war, aber diese Tätigkeiten werden sich wohl auf wenige Tage im Jahr beschränkt haben.

Abstract

Publication of two block statues from the 'cachette' at Karnak, both dating to the 4th century BC. Cairo JE 37143 bears almost literally the same texts as the recently published statue of the very same person, Cairo JE 37129. The owner of the block statue Cairo JE 37847 lists no less than 38 priestly titles which he possessed. Some of them pertain to cults as yet unknown.

Der von Gott begnadete Herrscher.
Eine sakro-politische Verkündigung des Chnum für *Jnj-jt=f-ʿ3*, monumentalisiert auf einem Sakralbau in Elephantine[1]

Von Ludwig D. Morenz

1. Eine spezielle textliche Inszenierung des thebanischen Potentaten *Jnj-jt=f-ʿ3*. Die Steintafel mit der Verkündigung des Chnum

Aus den Grabungen des Deutschen Archäologischen Instituts im Bereich des Satet-Tempels von Elephantine[2] stammt eine Steintafel aus Sandstein mit einem ausgesprochen bemerkenswerten Text von *Jnj-jt=f-ʿ3* aus der mittleren 11. Dynastie (Abb. 1)[3]. Dieses Objekt ist nur ca. 5 cm dick, so daß es sich bei dieser Steintafel mit großer Wahrscheinlichkeit nicht um einen Architrav im engeren Sinn handelt[4]. Die Innenmaße des Baues, zu dem die Steintafel vermutlich gehörte, betrugen ca. 1 x 1 m, während man mit einer lichten Höhe von ca. 2 m rechnen kann[5]. Es handelt sich also um einen Schrein.

In dieser in der Forschung bisher noch kaum beachteten Inschrift[6] wurde eine außergewöhnliche Textform für die Legitimation von *Jnj-jt=f-ʿ3* als König benutzt. Dies fügt sich in andere Darstellungen des sich rasant aus kleinen lokalen Anfängen entwickelnden thebanischen Königtums der 11. Dynastie insofern ein, da sowohl neue Formen gefunden als auch alte, traditionelle für die Herrschaftsdarstellung und -legitimation übernommen wurden. Diese Doppelgleisigkeit bei der Darstellung wird besonders in der vielfältigen monumental-sakralen Präsentation von *Mnṯw-ḥtp* II. in Wort, Bild und Bau an verschiedenen Orten – etwa Theben, Dendera oder Gebelein – deutlich[7]. Mutmaßlich wurde im Umkreis des thebanischen Herrschers der 11. Dynastie ein besonderer Bedarf an Schaustellung für das neu installierte thebanische Königtum vor den Menschen und vielleicht sogar besonders vor den

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[1] E. Blumenthal, F.A.K. Breyer, T. Malcherowitz und W. Schenkel lasen frühere Versionen kritisch. Außerdem danke ich besonders W. Kaiser für sehr wichtige Anregungen.

[2] Die Verehrung des Chnum im Satet-Tempelbereich reichte vermutlich bis in das Alte Reich zurück, und vielleicht stand schon damals dort ein Naos für ihn; W. Kaiser et al., *Stadt und Tempel von Elephantine, 19./20. Grabungsbericht*, in: *MDAIK* 49, 1993, S. 133–187, 150 mit Anm. 48.

[3] W. Kaiser et al., *Stadt und Tempel von Elephantine, fünfter Grabungsbericht*, in: *MDAIK* 31, 1975, S. 39–84, Taf. 20b.

[4] Diese Beobachtung verdanke ich W. Kaiser.

[5] W. Kaiser, in: *MDAIK* 49, 1993, S. 146, D.

[6] Die erste und m.W. bisher einzige Übersetzung findet sich bei J. Quack, *Studien zur Lehre für Merikare*, *GOF* IV, 23, Wiesbaden 1992, S. 102.

[7] Vgl. L.D. Morenz, *Geschichte(n) der Zeit der Regionen („Erste Zwischenzeit") im Spiegel der Gebelein-Region – Eine fragmentarische dichte Beschreibung*, Habilitationsschrift Tübingen 2001 (im folgenden Morenz, *Geschichte(n) der Zeit der Regionen* zitiert), Kap. III.a.1.β) Die Manifestation eines sakro-'politischen' Anspruchs – Zum Tempel-Bauprogramm Mentuhoteps II. in Oberägypten und insbesondere zur Bedeutung des Gebeleiner Baues.

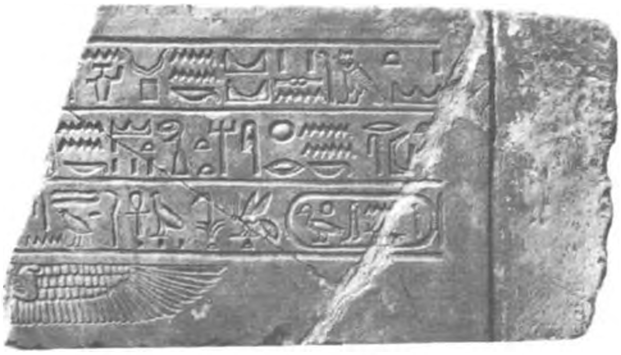

Abb. 1: Steintafel des *Jnj-jt=f-ꜥꜣ* aus Elephantine

Göttern[8] empfunden. Entsprechend wurde es monumental und gerade auch mittels hieroglyphischer Texte als einem Hauptmedium der ägyptischen hohen Kultur (*high culture*) inszeniert. Ob es sich dabei um eine Art Propaganda, die andere überzeugen will, oder eher um eine Form der Selbstindoktrinierung der Elite[9] handelt, läßt sich wegen der fragmentarischen Überlieferung und vor allem unserer dürftigen Kenntnis von altägyptischen Produktions- und Rezeptionsweisen[10] kaum einfach entscheiden. Dieses Problem müßte in größerem Zusammenhang – aber zugleich konkret für diese spezifische historische Situation – zu klären versucht werden. Die Annahme einer offenen Mischlösung scheint vorerst ratsam, schließen doch die Aspekte Selbstindoktrinierung und Propaganda einander nicht aus.

Auf dem Fragment steht zu lesen:

	Paratext
[ꜥnḫ Ḥr Wꜣḥ-ꜥnḫ	
nsw bjtj zꜣ Rꜥ Jnj-jt=f-ꜥꜣ ms.n Nfr.w	
ḏd mdw j]n H̱nm.w	
	Verkündigung des Chnum
wp.n(=j) n=k ḏw.wj znm.t	Lokalbezug
[...	
...	
d]j.n(=j) n=k ḫꜣs.wt jmn.t jꜣb.t	Wendung ins Allgemeine
sḫr.n(=j) n=k rsj.wt	Gegen „Rebellen“
[...	
rdj.n(j) jw.t tꜣ.wj ḫr jnw.t??]=sn	
ṯwt ḥkꜣ ꜥnḫ.w zꜣ Rꜥ Jnj-jt=f-ꜥꜣ	*Jnj-jt=f-ꜥꜣ* als Herrscher

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[8] L.D. Morenz, *Die Götter und ihr Redetext: Die ältestbelegte Sakral-Monumentalisierung von Textlichkeit auf Fragmenten der Zeit des Djoser aus Heliopolis*, i.Dr.

[9] Dieses von M. Liverani für den Alten Orient entwickelte Konzept wurde für das Alte Ägypten fruchtbar zu machen versucht in L.D. Morenz, *Das Lese-Bild von Königskartusche, Löwe und Stier versus vier Heuschrecken – Zur Selbstindoktrinierung der ägyptischen Elite*, in: *ZÄS* 126, 1999, S. 132–141.

[10] Zur Problematik der intendierten Leserschaft(en) vgl. Morenz, *Geschichte(n) der Zeit der Regionen*, Schlußüberlegungen d) Autoren, Werkstätten, Leser – Zur Schöpfung und Rezeption von Texten und Bildern in der Zeit der Regionen.

[Es lebe der Horus *Wꜣḥ-ꜥnḫ*,
König von Ober- und Unterägypten *Jnj-jt=f-ꜥꜣ*[a], geboren von *Nfr.w*[b]
Worte sprechen] durch[c] Chnum:

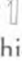
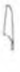
Ich öffne für dich[d] die beiden Berge[e] von Bigge[f]
. . .
. . .[g]
Ich gebe für dich die westlichen und östlichen[h] Berg-/Fremdländer[i]
Ich werfe nieder für dich die Rebellen
. . .
[Ich lasse kommen für dich die (beiden?) Länder mit ihren 'Tributen??][k]
Du bist der Herrscher der Lebenden[l], der Sohn des Re, *Jnj-jt=f-ꜥꜣ*

Das pluralische Pronomen =*sn* in Z. 3 dürfte sich auf eine auf dem Fragment nicht erhaltene Aussage beziehen. Demnach handelt es sich also nur um ein Textfragment, keinen völlig geschlossenen Text[11]. Damit aber kommt man für die Rekonstruktion über die Sonnenscheibe als hypothetisch anzusetzender Mitte deutlich heraus. Daraus folgt, daß auf diesem Fragment etwa die Hälfte des Textes fehlt.

Kommentar zu einzelnen Stellen

a) Nach dem zur Verfügung stehenden Platz läßt sich mit zwei Titeln rechnen. Wahrscheinlich handelt es sich hier um einen Bau von *Jnj-jt=f(-ꜥꜣ)* II.[12]. In der frühen und mittleren 11. Dynastie waren die typischen Namen der thebanischen Potentaten der Horusname und der *zꜣ-Rꜥ*-Name, während der *nsw-bjtj*-Name erst wieder mit *Mnṯw-ḥtp* II. und dessen stärker königlichem Anspruch wichtig wurde (bzw. davor den thebanischen Potentaten noch als zu anspruchsvoll galt)[13].

b) Das unmittelbare Aufeinander von Königstitulatur und der Gott-König-Rede wirkt wie ein Bruch im Textfluß. Auf einigen Reliefs der 11. Dynastie aus dem Tempel von Tod aber steht vergleichbar die Königstitulatur, worauf unmittelbar folgt: *ḏd mdw jn* Gott NN[14]. Als Ausgangspunkt dieser Textgattung kann man eine Umsetzung des Musters Bildbeischrift in Text vermuten. Tatsächlich waren die Bildbeischriften dieser Art in der 11. Dynastie teilweise sehr textartig, wobei man besonders an die gelegentlich zur Litanei expandierte *dj-ꜥnḫ*-Formel, vorzüglich in der Schreibung von *ḏd mdw jn* Gott *NN dj.n(=j) n=k* Gabe NN in Kolumnen[15], denken kann.

c) Erhalten ist nur . Damit ist es paläographisch möglich und kontextuell wahrscheinlich, aber nicht sicher, daß es sich hier um ein  handelt.

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[11] Irrtümlich als ein zusammenhängender Text wurde dieses Fragment übersetzt von J. Quack, *op. cit.*, S. 102.

[12] Vgl. auch W. Kaiser, in: *MDAIK* 49, 1993, S. 147.

[13] Hierzu ausführlicher Morenz, *Geschichte(n) der Zeit der Regionen*, Kap. III.a.2.d) Exkurs zur Titulatur Mentuhoteps II.

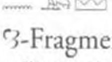
[14] Vgl. etwa F. Bisson de la Roque, *Tôd, FIFAO* 17, Kairo 1937, Inv.Nr. 1543 + 1120, Tôd, Fig. 24, S. 73; Inv.Nr. 2214, Tôd, Fig. 25, S. 74; Inv.Nr. 2123, Fig. 37 und 38. Hier handelt es sich nach dem Layout zwar um Bildbeischriften, aber diese wirken doch sehr texthaft, vgl. besonders Fig. 37 als zur Litanei expandierte *dj-ꜥnḫ*-Formel in Kolumnen.

[15] Vgl. z.B. F. Bisson de la Roque, *op. cit.*, S. 85, Fig. 37, hier stehen immerhin fünf Kolumnen + Gottesname hintereinander.

d) Wegen des Suffixpronomens ist wahrscheinlich, daß der *Jnj-jt=f-ꜥꜣ* schon zuvor genannt wurde. Hier handelt es sich um einen geschlossenen Text und nicht um eine Bildbeischrift, wo solcherart textuelle Kohärenz nicht nötig wäre. König und Gott als Adressat und Sprecher dürften zwecks Kontextualisierung der in der ersten und zweiten Person gehaltenen Rede als eine Art Paratext[16] vor der wörtlichen Rede genannt worden sein. Eben dadurch wird erst klar, auf wen sich „ich" und „du" beziehen.

Das Erschließen fremder Länder wird üblicherweise als „öffnen", ägyptisch: *wp* und auch *wbꜣ*, bezeichnet.

e) Hiermit wird der Katarakt bezeichnet.

f) In etwas späterer Zeit wurde in monumentalischen Texten von *Jnj-jt=f-ꜥꜣ* geschrieben: [17]. Solche Unterschiede in der Schreibung können als Indizien für die Datierung der *Jnj-jt=f-ꜥꜣ*-Fragmente benutzt werden, sofern je später in der Regierungszeit um so konventionellere monumentalhieroglyphisch-eugraphische[18] Schreibungen benutzt wurden. Man kann geradezu mit einer Reform des Schriftwesens und insbesondere dem Neuaufbau einer monumentalschriftlichen Eugraphie im thebanischen Bereich während der späteren 11. Dynastie rechnen[19].

g) Nach dem Platz folgten wohl zwei weitere, wahrscheinlich parallel gebaute Aussagen von Chnum, vermutlich im performativen *sḏm.n=f*.

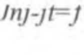
h) Wahrscheinlich war von den zwei *t* eines für *jꜣb.t* bestimmt, also nicht: *jmn.tt*. Immerhin ist die jüngere Form *jmn.tt* auch schon in den frühen Sargtexten belegt, doch überwiegt *jmn.t*[20]. Außerdem wird für *jꜣb.t* ein *t* benötigt. Damit handelt es sich um eine kalligraphische Umstellung.

i) Der Bezug auf das Ausland erschiene für einen lokalen Potentaten unpassend und markiert hier deutlich pharaonischen Anspruch.

k) An dieser Stelle rechne ich mit einem Bezug auf den eigenen Herrschaftsbereich des *Jnj-jt=f W3ḥ-ꜥnḫ*, insbesondere unter Betracht der nachfolgenden Wendung *ḥkꜣ ꜥnḫ.w*.

l) Der Titel *ḥkꜣ ꜥnḫ.w* ist gemäß *WB* I, 201,11 erst ab dem Neuen Reich belegt. E. Blumenthal wies darauf hin, daß *ḥkꜣ* in der Zeit der Regionen (Erste Zwischenzeit) und im Mittleren Reich besonders für Gaufürsten, aber auch für den König gebraucht wurde[21]. Hinsichtlich der Verwendung von *ḥkꜣ* für den König kann man an eine Entwicklung aus der Vorstellungswelt der Gaufürsten denken, wobei der Bezug auf „die Lebenden" einen weiteren, eben den königlichen, Geltungsbereich absteckt.

2. Anmerkungen zur Paläographie und Eugraphie sowie zur Entwicklung der Monumentalschrift im thebanischen Bereich während der 11. Dynastie

Einige Zeichen dieser Inschrift stehen noch nahe an hieratischen Formen, insbesondere: . Das Phonogramm von *rsj* wurde verkehrt herum geschrieben, was anzeigt, daß der Text vermutlich von einer andersläufigen hieratischen Vorlage abgeschrieben wurde[22].

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[16] G. Genette, *Paratexts, Thresholds of Interpretation* (*Literature, Culture, Theory* 20), Cambridge 1997 (zuerst französisch: *Seuils*, Paris 1987).

[17] W. Kaiser, in: *MDAIK* 49, 1993, Taf. 29b.

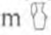
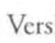
[18] Monumentalhieroglyphische Eugraphie kann sich zeigen in der Auswahl der Zeichen, aber auch im Layout und der Gestaltung der Zeichenformen.

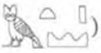
[19] Siehe Abschnitt 2.

[20] Dies zeigt die noch unveröffentlichte Konkordanz zu den Sargtexten, die mir W. Schenkel zu benutzen gestattete.

[21] E. Blumenthal, *Untersuchungen zum ägyptischen Königtum des Mittleren Reiches I. Die Phraseologie*, *ASAW* 61, Berlin 1970, sub A 1.23, S. 25f.

[22] Vgl. aber das in der hieroglyphischen Beschriftung andersläufige Fragment (siehe unten), welches jedoch vermutlich nicht als Originalfassung bestimmt werden kann.

Die 11. Dynastie erscheint im erhaltenen Material als eine Zeit der allmählichen Entwicklung der Monumentalschrift im thebanischen Machtbereich[23]. Die merkwürdige Zeichenform für *ḫnm* – – steht noch auf einigen anderen Objekten aus der Zeit von *Jnj-jt=f-ꜥꜣ Wꜣḥ-ꜥnḫ* (siehe unten). Vermutlich war sie *grosso modo* auf die Zeit von *Jnj-jt=f-ꜥꜣ Wꜣḥ-ꜥnḫ* beschränkt. Jedenfalls begegnet auf einem Bauteil von *Jnj-jt=f-ꜥꜣ* III. (Louvre)[24] wahrscheinlich bereits wieder die Standardform . Die Schreibung mit Ausgußtülle findet sich oft in den hieroglyphischen Formen im Alten Reich. Dagegen kann man die Trennung des oberen Teiles des Henkels vom Gefäß aus dem Hieratischen erklären. In den Formen des Zeichens im Alten Reich war der Henkel noch oben und unten mit dem Gefäß verbunden, etwa: [25]. Dagegen wurde es im Mittleren Reich üblich, daß der obere Teil des Henkels nicht mehr mit dem Gefäß verbunden war, etwa: [26]. Aus der hier besprochenen hieroglyphischen Version kann man mit einiger Wahrscheinlichkeit ableiten, daß im Hieratischen auch schon in Theben in der frühen 11. Dynastie eine Form ähnlich der des Mittleren Reiches in Gebrauch war.

Auffällig ist die ausgewogene Verteilung der Zeichen, wozu besonders auf das Ende von Z. 1 hingewiesen werden kann. Das *t* ist dort aus dem Schriftquadrat etwas herausgerückt, so daß der durch das *m* entstehende Leerraum gefüllt wird. Diese Art wirkt freilich etwas schulmäßig-schablonenhaft, ist doch das *t* genau um die Hälfte nach links verrückt (). Man bemerkt das Bemühen, erkennt also eine gewisse akademische Steifheit.

3. Überlegungen zu Inhalt, Form und Bedeutung des Textes

Nach Abschätzung des insgesamt für den Text zur Verfügung stehenden Platzes dürften hier etwa sieben Aussagen des Chnum in paralleler Form jeweils im performativen *sḏm.n=f* gestanden haben. Wegen des mehrfach hintereinander wiederholten Satzmusters handelt es sich um einen litaneiähnlichen Text.

Diese Steintafelinschrift bildet eine bemerkenswerte sakro-politische Verkündigung des Chnum, die der sakro-politischen Legitimation des thebanischen Königtums diente. Vermutlich wurde sie aus der üblichen Götterrede *ḏd mdw jn NN dj.n(=j) n=k ꜥnḫ wꜣs* … „Worte sprechen von Gott NN: Ich gebe für dich (König) alles Leben, Gesundheit …" u.ä.[27] entwickelt. Hier wurde aus der klassischen, seit der Frühzeit belegten[28] Form aber etwas völlig Neues[29] gemacht, das auf besondere Weise der Legitimation des Königs dient.

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[23] Die Entwicklung versuchte ich an einigen konkreten Beispielen *pars pro toto* zu demonstrieren, vgl. L.D. MORENZ, *Fair gegenüber dem „Mann von Draußen" (rwtj) – Zu einer Passage einer Inschrift der Ersten Zwischenzeit*, in: *JEA* 84, 1998, S. 196–201, 197f., DERS., *Besondere Zeichen aus der späten 11. Dynastie; zu den Inschriften des Antef, Sohn der Myt*, in: *SAK* 25, 1998, S. 237–249, 242–249, DERS., *Die schmähende Herausforderung des Thebaners Ḏꜣrj* an *Ḥtj*, in: *WdO* 29, 1998, S. 5–20, 19 und DERS., *Geschichte(n) der Zeit der Regionen*, passim.

[24] W. KAISER, in: *MDAIK* 49, 1993, Taf. 29d.

[25] Zahlreiche Beispiele bietet H. GOEDICKE, *Old Hieratic Palaeography*, Baltimore 1988, S. 45 sub W 9/508.

[26] G. MÖLLER, *Hieratische Paläographie* I, Leipzig 1927², Nr. 508.

[27] Zum Thema Gaben der Götter an den König vgl. E. BLUMENTHAL, *Königtum*, S. 82–91.

[28] Hieroglyphisch monumentalisierte Göttersprache steht in Textform schon auf dem sogenannten Schrein des Djoser aus Heliopolis, in kürzerer Form erscheint sie bereits als Beischrift auf Siegeln der Frühzeit, vgl. dazu: L.D. MORENZ, *Die Götter und ihr Redetext*, i.Dr.

[29] Jedenfalls ist diese Textform im Überlieferten noch nicht belegt. Man könnte dies alternativ auch dem Überlieferungszufall zuschreiben, doch ist dies m.E. weniger wahrscheinlich.

In der 11. Dynastie suchte man offenbar neben traditionellen Mustern verstärkt neue Wege der Darstellung des Königtums, wofür der fragmentarisch überlieferte narrative Königstext mit wörtlicher Rede von el-Deir[30] und die Inschrift des frühthebanischen Königs mit besonderem Bezug auf Hathor[31] zu vergleichen ist. Man kann diesen Vorgang als Teil einer Medienrevolution am Ende der Zeit der Regionen und anfangs des Mittleren Reiches beschreiben[32]. Für den Text der Steintafel scheint der (m.E. zu Recht) umstrittene, anachronistische Begriff Propaganda[33] *mutatis mutandis* und in Verbindung mit dem Konzept Selbstindoktrinierung der Elite gut zu passen, verkündet doch der Gott Chnum den Anspruch ebenjenes *Jnj-jt=f-ꜥꜣ* in einer besonderen Textform. Für die Verkündung seines königlichen Anspruches in Elephantine bedient sich *Jnj-jt=f-ꜥꜣ* des dort ansässigen Gottes Chnum. Man kann spekulieren, daß die auf dieser Steintafel monumentalisierte Verkündigung des Chnum in parallelen Aussagen im performativen *sḏm.n=f*[34] nur einen Ausschnitt aus einem längeren Text bildet, und daß dieser zwecks Indoktrinierung, sei es der Elite, sei es vielleicht sogar eines breiteren Publikums, öffentlich vorgelesen wurde[35].

Offen bleibt aber bei unserem jetzigen Kenntnisstand die Frage, für welche Modell-Leser dieser konkrete Text konzipiert wurde. Jedenfalls wurde in dem Sakralbereich der Satet und des Chnum ein sakro-politischer Text *sub specie aeternitatis* monumentalisiert. Die rechte Herrschaft von *Jnj-jt–f-ꜥꜣ* wurde mit dieser „versteinerten" Verkündigung gewissermaßen in die Landschaft eingeschrieben[36], wobei der Ort Elephantine als Südgrenze des Staates Ägypten sicher in (königs-)ideologischer Hinsicht hohe Bedeutung trug und für die monumentalisierte Inszenierung des Herrschers entsprechend eine wichtige Rolle spielte.

Die Schöpfung und Verwendung der anscheinend neuen und besonderen Textform kann man wahrscheinlich damit erklären, daß *Jnj-jt=f-ꜥꜣ* in jener speziellen historischen Situation der Legitimation als König besonders bedurfte. Dieser starke, mit legitimatorischer Absicht verbundene Bezug auf die Gottheit findet Parallelen in etwa kontemporären Selbst-Präsentationen (Autobiographien) von Männern der lokalen Eliten nach dem Motto „Erwählung durch den lokalen Gott"[37]. Bei dem in der Inschrift genannten „Niederwerfen der Rebellen" könnte man konkret an innerägyptische Gegner des thebanischen Herrschers denken, doch wird man es wegen des unmittelbar vorausgehenden Verses wohl besser auf äußere Feinde beziehen.

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[30] H.G. Fischer, *Inscriptions from the Coptite Nome*, in: *AnOr* 40, Rom 1964, Nr. 45, S. 112–118, einige neuere Überlegungen dazu bei Morenz, *Geschichte(n) der Zeit der Regionen*, Kap. IV.c) Die Wiederausprägung territorialer Herrschaft.

[31] Grundlegend veröffentlicht von J. Vandier, *Une inscription historique de la Première Période Intermédiaire*, in: H.B. Rosèn (Hrsg.), *Studies in Egyptology and Linguistics in Honour of H.J. Polotsky*, Jerusalem 1964, S. 9–16, pl. I.

[32] Die Problematik wird angerissen bei L.D. Morenz, *Beiträge zur ägyptischen Schriftlichkeitskultur des Mittleren Reiches und der Zweiten Zwischenzeit*, *ÄAT* 29, Wiesbaden 1996, S. 3; zu den stark königslegitimierenden Inschriften gehören die Tempelinschriften von Sesostris I. in Tod (C. Barbotin/J.J. Clère, *L'inscription de Sésostris Ier à Tôd*, in: *BIFAO* 91, 1991, S. 1–32 und Taf. 1–31) und in Elephantine (W. Schenkel, *„Littérature et politique" – Fragestellung oder Antwort? Zwei Diskussionsbeiträge*, in: J. Assmann/E. Blumenthal (Hrsg.), *Literatur und Politik im pharaonischen und ptolemäischen Ägypten*, in: *BdE* 127, Kairo 1999, S. 63–74).

[33] Zur mehrschichtigen Problematik vgl. S. Quirke, *Translating Maat*, in: *JEA* 80, 1994, S. 219–231, 225.

[34] P. Vernus, *"Ritual" sḏm.n.f and some Values of the "accompli" in the Bible and the Koran*, in: S. Groll (Hrsg.), *Pharaonic Egypt and the Bible*, Jerusalem 1985, S. 307–319.

[35] C. Eyre, *The Semnah Stelae: Quotation, Genre, and Functions of Literature*, in: S. Israelit-Groll (Hrsg.), *Studies in Egyptology*, Jerusalem 1990, Band I, S. 134–165. Hier kann auf das von M. Liverani, in: *Prestige and Interest*, Padua 1990, entwickelte Modell (vgl. besonders S. 24f. und 28f.) hingewiesen werden.

[36] Zu dieser monumentalen Einschreibung in die Landschaft vgl. Morenz, *Geschichte(n) der Zeit der Regionen*, Kap. III.a.1.β.

[37] So etwa *Nfr-jw* von Dendera, *H̱ty* von Assiut oder *ꜥnḫ.tjfj* von Moꜥalla usw.; vgl. L.D. Morenz, in: *OLZ* 92, 1997 (Rez. von D. Franke, *Das Heiligtum des Heqaib auf Elephantine*, Heidelberg 1994), Sp. 158–167, bes. 160–162.

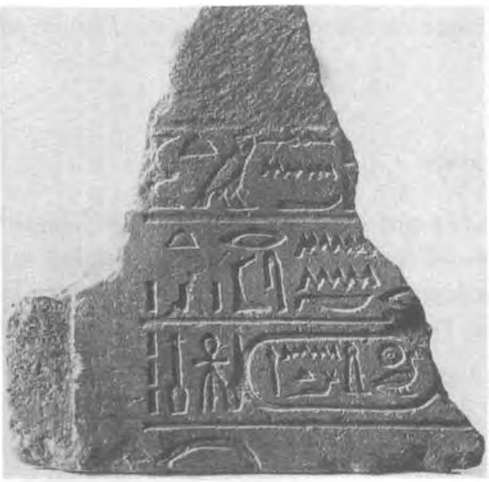
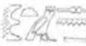


Abb. 2: Steintafel von *Jnj-jt=f-ʿꜣ* aus Elephantine, Louvre E 12661b

4. Ein engverwandter Architrav mit gleichem Text

Ein zu der Steintafel mit der sakro-politischen Verkündigung des Chnum nahezu paralleles, symmetrisches Gegenstück existiert in dem Fragment Louvre E 12661b (Abb. 2)[38]. Bemerkenswert ist hier in Z. 1 die offenbar Platzgründen geschuldete Umkehrung des Determinativs von *znm.t*: [39]. Auf der Photographie deutlich zu erkennen, sind auch die beiden Berge ohne ideographische Striche geschrieben. In Z. 3 steht noch nach dem Ringnamen *ms Nfr.w*, was bei der oben besprochenen Steintafelinschrift fehlt. Wie sich immer wieder zeigt, war absolute Symmetrie bei den Ägyptern sowieso weniger üblich. Die leichte Symmetriebrechung erscheint geradezu als Regel.

Wahrscheinlich ist der bei Louvre E 12661b unten links erhaltene Bogen alt. Diesen müßte man dann vermutlich zu einer Kartusche ergänzen, was deutlich von dem Layout des anderen Blockes abweicht. Man kann durchaus erwarten, daß nur die Verkündigung des Chnum für den König symmetrisch angebracht wurde, während die sonstige Beschriftung variiert haben könnte, insbesondere, wenn es sich um Tore für Gebäude mit unterschiedlicher Funktion handelte.

Sicher jedenfalls bietet die zweifach überlieferte sakro-politische Verkündigung des Chnum eine besondere Form von monumentaler Schaustellung für *Jnj-jt=f* II. als rechtmäßigem, gottbegnadetem König.

Nach diesen Überlegungen kann die folgende Rekonstruktion vorgeschlagen werden. Wenn die beiden Steinplatten mit der sakro-politischen Verkündigung für Chnum zu einem Gebäude gehörten, kann man sich vorstellen, daß Louvre E 12661b als Architrav fungierte und damit den Eingang des Schreins bildete. Demgegenüber könnte die eingangs besprochene Steintafel in die Rückwand des Schreins eingelassen gewesen sein. Nach dem Inhalt der Verkündigung des Chnum zu schließen, könnte in dem Schrein eine Statue des Chnum oder eine von Chnum und dem König *Jnj-jt=f-ꜥꜣ* gestanden haben.

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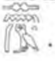
[38] W. KAISER, in: *MDAIK* 49, 1993, Taf. 28e.

[39] Zu Zeichenumdrehungen um 90° vgl. W. SCHENKEL, *Frühmittelägyptische Studien*, Bonn 1962, §§ 3 und 4, S. 29–31.

5. Der rechte Türpfosten

Ebenso aus Sandstein sind die gleichfalls in Elephantine gefundenen[40] Fragmente (Abb. 3). Schon in den Vorberichten wurde von W. Kaiser die Zusammengehörigkeit mit den Steintafeln vermutet[41]. Dafür spricht der Gesamtcharakter, das Layout der Inschrift, einzelne Zeichenformen wie besonders das Zeichen für Chnum mit der Tülle und auch die Orthographie und die Schreibung von *znm.t*: . Man kann lesen, ergänzen und übersetzen:

[ꜥnḫ ḥr Wꜣḥ-ꜥnḫ ?]
mry ẖnmw ḫntj kbḥ
ḥr nḫt dꜣj ḫꜣs.t
⸢nsw bjtj⸣[zꜣ Rꜥ] Jnj-jt=f-ꜥꜣ
ms.n Nfr.w

jr.n=f m mnw=f
n jt=f ẖnmw ḫntj znm.t
jr=f ꜥšꜣ

[Es lebe Horus *Wꜣḥ-ꜥnḫ*, ?[a]]
Geliebt von Chnum, dem Vordersten des Kataraktes;
Starker Horus, der das Fremdland niederschlägt[b],
König von Ober- und Unterägypten, Sohn des Re *Jnj-jt=f-ꜥꜣ*[c],
geboren von *Nfr.w*[d]:

Er machte als sein Denkmal
für seinen Vater Chnum, den Vordersten von Bigge,
damit er gibt viele[e] [...

Kommentar

a) Am Anfang des Türpfostens ist mit dem Königsnamen zu rechnen, auf den sich das *mry* bezieht. Die Annahme, daß es sich um *Wꜣḥ-ꜥnḫ* handelt, wurde bereits oben diskutiert. Alternativ kann man mit der Möglichkeit rechnen, daß der Pfeiler eingangs keine Königsnennung enthielt, sondern den Text des Architravs direkt fortsetzte[42].

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[40] W. Kaiser, in: *MDAIK* 31, 1975, S. 46 mit Anm. 24 und 28.

[41] *Loc. cit.*, S. 46, Anm. 28, und in: *MDAIK* 32, 1976, S. 71.

[42] W. Kaiser wies mich freundlich darauf hin, daß diese Möglichkeit, nach dem oberen Abschluß des Pfeilers zu urteilen, wohl vorzuziehen ist. Dies wird der in Vorbereitung befindlichen Publikation der Bauten der 11. Dynastie auf Elephantine durch W. Kaiser zu entnehmen sein.

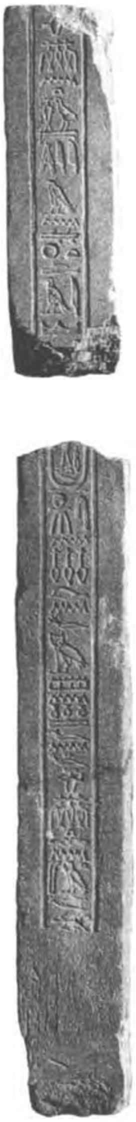

Abb. 3: Rechter Türpfosten von *Jnj-jt=f-ꜥꜣ* aus Elephantine

b) Dieses königliche Epitheton war schon im Alten Reich gebräuchlich und erscheint ähnlich auf dem *kꜣ*-Haus von *Mnṯw-ḥtp* II. aus Dendera[43]. Dort steht allerdings *dꜣj ḫꜣs.wt*. Vielleicht läßt sich der Gebrauch des Singulars historisch konkretisieren und auf Nubien beziehen. Andererseits kann man mit einer Formvariante bzw. eventuell auch einem Schreibfehler rechnen.

c) Dieser Einschluß von *zꜣ Rꜥ* in die Kartusche war eine übliche Namensschreibung bei *Wꜣḥ-ꜥnḫ*[44].

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[43] L. Habachi, *King Nebhepetre Mentuhotep: His Monuments, Place in History, Deification and Unusual Representations in the Form of the Gods*, in: *MDAIK* 19, 1963, S. 16–52, Taf. V.

[44] Vgl. etwa W. Kaiser, in: *MDAIK* 31, 1975, Taf. 19a und passim.

d) Vgl. hierzu W. SCHENKEL, *Königsmutter Nfr.w: Phantom oder Realität*, in: *GM* 96, 1987, S. 93f. Auf der Stele des *Ṯtj* (BM 614, Z. 12f.) wurde *Nḫt-nb-tp-nfr* als „Sohn" (*zꜣ*) von *Wꜣḥ-ꜥnḫ* bezeichnet. Man kann also annehmen, daß der Name *Nfr.w* zwei verschiedene Frauen bezeichnet. In der 11. und frühen 12. Dynastie war *Nfr.w*, vermutlich ein Kurzname, als Frauenname bei Königsgemahlinnen beliebt. Außerdem mögen die Namen in ihrer Langform unterschiedlich gelautet haben.

e) Der Text endet auf diesem Pfeiler offen und ging wahrscheinlich auf dem anderen weiter. Immerhin muß darauf hingewiesen werden, daß Texte in der Regel nicht über zwei Pfeiler geführt wurden. Mit Blick auf die Zeit der Neuausbildung der monumentalhieroglyphischen Tradition sollte eine solche Ungewöhnlichkeit des Layouts aber nicht verwundern.

6. Der hypothetische linke Türpfosten

Vom linken Türpfosten wurde bisher nichts gefunden. Das Stichwort *ꜥšꜣ* von dem rechten Türpfosten liefert aber doch einen recht guten Anhaltspunkt dafür, womit links fortgefahren worden sein könnte. Nach der Parallele von einem Oktogonalpfeiler eben von *Jnj-jt=f-ꜥꜣ Wꜣḥ-ꜥnḫ*, der gleichfalls aus Elephantine stammt[45], kann man eventuell zu *jr=f ꜥšꜣ* [*wr.t ꜥnḫ mj Rꜥ ḏ.t*] – „er möge machen gar viel Leben wie Re ewiglich" – ergänzen. Alternativ könnte man hier Sed-Feste – *ḥb-sd* – erwarten. Ganz unten wird man dann die Königstitulatur ergänzen können, wobei der Text sicher mit *ꜥnḫ ḏ.t* schloß. Ungewöhnlich, aber durch das offene Ende von *jr=f ꜥšꜣ* zumindest wahrscheinlich, erscheint, daß dieser Text auf dem rechten Pfeiler begann und dann auf dem linken fortgesetzt wurde. Ob man dafür Schwierigkeiten des Vorzeichners mit der Umsetzung der Textvorlage verantwortlich machen kann? Nach dem bisher Vorgeführten bietet sich die folgende Rekonstruktion an (Abb. 4).

7. Zur Bauaktivität von *Wꜣḥ-ꜥnḫ* in Elephantine

Nach Zeichenform samt dem unbeholfener wirkenden Layout, sowie der Verwendung der Groß-Kartusche, kann vermutet werden, daß die beiden Fragmente aus einer früheren Zeit von *Wꜣḥ-ꜥnḫ* stammen[46]. Man kann eine deutliche Entwicklung im Bereich der Monumentalschrift zwischen den früheren und späteren Jahren von *Wꜣḥ-ꜥnḫ* unterstellen (siehe oben).

Anscheinend kam es nach dem Alten Reich in der Gegend von Elephantine, wo im späten Alten Reich in den Gräbern der Qubbet el-Hawa eine starke hieroglyphische Tradition faßbar ist, zu einem Bruch, der mit den gesellschaftlichen Veränderungen während der Zeit der Regionen erklärt werden kann. Die Monumentalschrift wurde dann unter der mittleren und späten 11. Dynastie intern wieder stark entwickelt, während nach der sogenannten Reichseinigung (*zmꜣ tꜣ.wj*) unter *Mnṯw-ḥtp Nb-ḥp.t-Rꜥ* auch in diesem Bereich nördlich traditionaler Einfluß faßbar wird[47].

Insbesondere für die eingangs besprochene Steinplatte kann man nach Inhalt des Textes, Layout und Zeichenformen eine besondere Qualität der Inschrift konstatieren. Von daher scheint es plausibel, daß sie von einem Priester-Schreiber und einem Handwerker aus Theben, der Residenz der 11. Dynastie,

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[45] W. KAISER, in: *MDAIK* 49, 1993, Taf. 28c.

[46] W. KAISER, in: *MDAIK* 31, 1975, Taf. 23, a und b; jetzt vollständiger: W. KAISER, in: *MDAIK* 49, Taf. 28, a und b.

[47] Grundlegend herausgearbeitet von H.G. FISCHER, *An Example of Memphite Influence in a Theban Stela of the Eleventh Dynasty*, in: *Artibus Asiae* 23, 1959, S. 240–252.

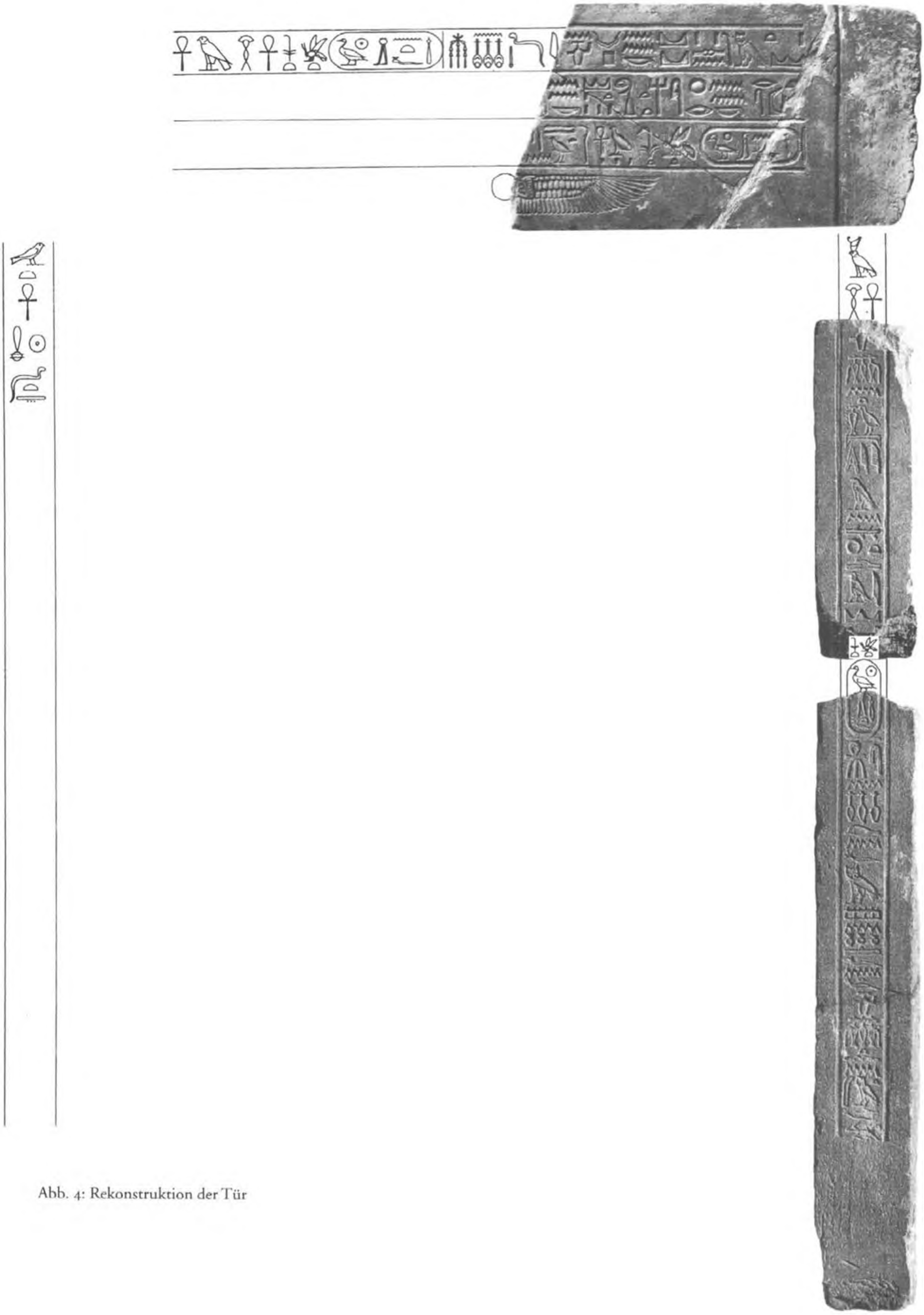

Abb. 4: Rekonstruktion der Tür

konzipiert und angefertigt wurde. Der Qualität der Inschrift ist auch die Darstellung der allerdings nur fragmentiert erhaltenen geflügelten Sonnenscheibe gemäß.

Insgesamt läßt sich eine auffällig rege Bautätigkeit der mittleren/späten 11. Dynastie in Elephantine beobachten, stammen doch knapp 20 Fragmente von *Jnj-jt=f* II. und III., die auf mindestens sechs Stein-Ziegel-Bauten hinweisen[48], aus den Grabungen in Elephantine. Zur Zeit von *W3ḥ-ꜥnḫ* war diese bauliche Aktivität, von Theben mit seinem Grab[49] abgesehen, gemäß den erhaltenen Zeugnissen deutlich stärker als an den anderen Orten Oberägyptens. Dies kann am Überlieferungszufall sowie der systematischen und intensiven Grabungstätigkeit in Elephantine liegen. Andererseits konnte man sich auch denken, daß Elephantine als die klassische Südgrenze Ägyptens – und auch des Machtbereichs von *W3ḥ-ꜥnḫ*[50] – eine besondere Bedeutung in der thebanischen „Königsideologie“ innehatte, die eben auch baulich dokumentiert und monumental zelebriert wurde.

Abstract

This article deals with some monuments of Antef II. from Elephantine. A reconstruction of their inscriptions will be proposed and interpreted.

According to this interpretation the texts express strategies to proclaim the legitimacy and the divine sanction of Antef's rule. This took place in the context of the emergence of new types of texts for the monumental presentation of the king during the 11th and early 12th Dynasty. The main focus of this article is on a fragmentary inscription of an architrave which is interpreted as a proclamation of the king by the local god, Chnum.

Some considerations on the development of monumental hieroglyphic writing during the 11th Dynasty conclude this paper.

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[48] W. Kaiser, in: *MDAIK* 49, 1993, S. 145.

[49] Vom Tempel des Amun hat sich nur das Fragment einer Oktogonalsäule erhalten, vgl. D. Franke, *Erste und Zweite Zwischenzeit – Ein Vergleich*, in: *ZÄS* 117, 1990, S. 119–129, 124f.

[50] Territorialangaben finden sich auf Denksteinen der 11. Dynastie, vgl. L.D. Morenz, in: *WdO* 29, 1998, S. 15f.

The Town of Syene
Preliminary Report on the 1st and 2nd Season in Aswan

By CORNELIUS VON PILGRIM, KAI-CHRISTIAN BRUHN and ADEL KELANY

in collaboration with ALI EL-ASFAR, ABDEL HAKIM HADDAD and MOHI EL-DIN MUSTAFA

(Tafeln 14–19)

I. Introduction

In October 2000 the Swiss Institute of Architectural and Archaeological Research on Ancient Egypt, Cairo and the Supreme Council of Antiquities, Aswan started a joint archaeological project in the old part of Aswan, the ancient town of Syene[1].

The decision to start a long term project in Syene was based mainly on two considerations.

1. In contrast to its importance as a trading centre, frontier garrison and counterpart of its twin town Elephantine, no systematic excavations have ever been conducted in Aswan. During our work in the joint German-Swiss mission in the town of Elephantine, however, it became more and more clear that an isolated view of Elephantine presents a distorted picture of the town's history, particularly for the Late Period and subsequent times. Remains of these periods are preserved in Elephantine not only to a very limited extent, but it was Syene which became the most important town site of the region in the Graeco-Roman Period. The stratigraphic sequence of the remaining urban occupation covers the main periods of the town in a unique way and will contribute to filling a gap in the archaeology of Roman and Early Medieval Egypt, and might also form a link to comparatively well recorded Nubia.

2. Like many other Egyptian cities located on ancient sites, Aswan faces today the serious conflict between the needs of a modern town and the obligation of preserving its historical roots. On the one hand the visible monuments and archaeological areas are threatened by the constant lack of space, particularly in the old part of the town. Some monuments such as the 'church of St. Psoti' have already disappeared completely and could later only be studied by means of secondary sources[2]. Other monu-

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[1] The joint mission was proposed by the former chief inspector of Aswan ABDEL HAKIM HADDAD, who started excavations in the area of the Isis temple in 1999, and we owe our deepest gratitude to the former General Secretary of the SCA, Prof. GABALLAH ALI GABALLAH, and the members of the Permanent Committee for granting the concession of work, as well as to the present General Secretary of the SCA, Prof. ZAHI HAWASS, for supporting the further seasons. We are also very grateful for the fruitful collaboration and generous support of the Institute of Geodesy and Photogrammetry of the ETH Zürich headed by Prof. ALESSANDRO CAROSIO. And last but not least we would like to express our sincere thanks to Dr. DIETRICH RAUE from the German Institute of Archaeology for all kind of support granted to the mission in the excavation house on Elephantine. – For correcting the English we are much indebted to MICHAEL JONES.

[2] H. JARITZ, in: *BdE* 47/2, 1985, pp. 1–19.

ments and archaeological areas are still used as dumping places for waste and building rubble and will sooner or later suffer the same fate, if no archaeological work is started. On the other hand large quarters of the old part of the modern town are abandoned and in ruins, waiting for new constructions. As the historical strata underneath will then inevitably be destroyed, there is an urgent need to develop a strategy of rescue excavations to obtain all available information about the affected areas. However, only a better understanding of the structure and history of the ancient town will provide a basis to assess the need of any rescue operations in scheduled construction works. Furthermore, it will help to understand those data collected in restricted salvage excavations within the greater scheme of the history and development of the town. Therefore the building up of a basis for systematic rescue archaeology in both scientific and organizational respects and the enforcement of rescue excavations are additional tasks of the project.

Topography of Aswan

The ancient town of Syene is located in the southern centre of modern Aswan. During the Middle Ages, when the town reached its largest expansion, the limits of the fortified area were marked by two prominent rocky outcrops at the Nile, the northern one in the line of the new Aswan police department, the southern one at the end of the modern river corniche at the Feryal garden (Fig. 1). The town was protected at that time by a massive fortification wall, which was still visible and was mapped by the Napoleonic expedition[3]. Some segments of the wall were still visible during the 1970s[4], but have today disappeared completely. Further east, the former *kôm* descends into a depression, which might once have been a small lake connected at times with a branch of the Nile. This area is still today known as *Birket Damas*.

When the Napoleonic expedition arrived in Aswan, the ancient town was totally abandoned and a small village grew up to the north of the ruined site. These northern outskirts developed during the Fatimid period and they indicate the expansion of the town at that time[5]. The decline of the town began under the Ayyubids, and in the Mamluk era the aggressive politics of the local Arab-Nubian tribe of the Beni Kenz against the Mamlukes created a situation of anarchy in the Aswan region. The disastrous effects of the Upper Egyptian plague of 1402/3 (A.H. 806) definitely marked the beginning of the end of the town. According to MAQRIZI more than 21,000 people died that year in Aswan[6]. The final blow, however, came in 1412 by military action against the uprising of the local Beni Kenz, who had established a virtually independent principality in Lower Nubia and had pillaged Aswan several times before: "the town walls were destroyed, the town was plundered and left as a heap of deserted ruins and without any inhabitants"[7]. The site of the ancient town was obviously not resettled until the 19th century, while the Fatimid district to the north stayed an insignificant hamlet[8].

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[3] *Description* I, pl. 31.

[4] E. BRESCIANI/S. PERNIGOTTI, *Assuan, Bibliotheca di Studi Antichi* 16, Pisa 1978, pl. 1.

[5] *Cf.* the expanding cemetery of this period northeast of the walled town. U. MONNERET DE VILLARD, *La Necropoli Musulmana di Aswan*, Cairo 1930.

[6] J.L. BURCKHARD, *Travels in Nubia*, London 1819, p. 4. Some of the early travellers obviously used this source in their own descriptions of Aswan, *cf.* R. RICHARDSON, *Travels along the Mediterranean*, London 1822, p. 348; An American (J.L. STEPHENS), *Incidents of travel in Egypt, Arabia Petraea and the Holy Land* I, New York 1838 (4. Aufl.), p. 98: “ more than twenty thousands of its inhabitants died in the year of the plague. In consequence of this terrible ravages of this scourge, the inhabitants abandoned it, but, still clinging to their ancient homes, commenced building a new town, beginning at the northern wall of the old.”; ED. DE CADALVENE/J. DE BREUVERY, *L'Egypte et la Nubie*, Paris 1848, p. 365. Even if one considers that Aswan was in the early Arab period the biggest and most significant town of Upper Egypt, the number of victims seems to be very high and should at least incorporate the inhabitants of Elephantine, who can hardly have escaped the scourge.

In the late 19th century the ancient *kôm* was cut through in an east-west direction, almost in the middle, in order to build a railway track leading from Shellal to a station close to the Nile[9]. After the station was moved to the northern outskirts, the line of the former tracks was changed into a road, known today as Kasr el-Hagar Street, serving as the main connection to the eastern outskirts.

The most prominent ruins of the former mound were once situated on the high granite rock north of the Cataract Hotel. The well preserved houses of this medieval town quarter were removed at the beginning of the 20th century in favour of a public garden[10].

The pharaonic name of Aswan, *swnw*, is attested for the first time in the Ramesside Period. At present, however, archaeological evidence collected beside the Isis temple date back only to the Late Period[11], but they indicate clearly that nowadays the old nucleus of the town is located further inland. Regarding the pharaonic name of the town, which might refer to an initial function as a trading place, the oldest site should have been located much closer to the Nile than today, so that we have to assume a considerable change of the natural topography by silting up the river banks[12].

Only three areas in Aswan, each one connected to a temple-site in a better or lesser state of preservation, are today registered archaeological sites. The most important and best preserved monument is the temple of Isis, built in the reign of Ptolemy III and later on converted into a church (area 1). It is situated in the largest archaeological area in the south-east of the ancient town and was separated in 1978 from the south-eastern corner of the town wall and extramural industrial quarters (area 2) by a modern asphalt street. The extensive reuse of decorated temple blocks in the latest reinforcement of this segment of the town wall allow one to assume that a small temple of Tiberius was built nearby, outside the Roman town, presumably on the processional route to Philae[13]. A third registered archaeological area is located in the northern part of the Roman town and surrounds a small temple built by Domitian and dedicated to Khnum (area 3).

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[7] U. Bouriant, *Maqrizi. Description topographique et historique de l'Égypte*, *MIFAO* 17, Paris 1900, p. 575.

[8] *Cf. Le Voyage en Égypte du Vénitien Anonyme. Août – Septembre 1589*, in: *Collection des Voyageurs Occidentaux en Egypte*, vol. 3, Cairo 1971, p. 15a.

[9] *Cf.* Baedeker, *Ägypten. 2. Teil: Ober-Ägypten*, Leipzig 1891, p. 304; Baedeker, *Egypt and the Sudan*, Leipzig 1908, p. 348.

[10] The picturesque scenery of the mediaeval ruins is shown in the background on many photographs and drawings, F.-L. Nordon, *Voyage d'Egypte et de Nubie*, Paris 1798, pls. 129–130; F. Gau, *Antiquitiés de la Nubie*, 1822, pl. 1; *D'un Album de Voyage, Auguste Bartholdy en Egypte (1855–1856)*, Colmar 1990, p. 69; F. Frith, *Egypt and the Holy Land in Historic Photographs*, New York 1980, p. 41.

[11] H. Jaritz/M. Rodziewicz, in: *MDAIK* 52, 1996, pp. 238 ff.

[12] Furthermore, it has to be taken into consideration that Syene and Elephantine were much closer connected to each other than today. Before the first dam was built it was quite possible to cross over without getting one's feet wet during the winter. J.L. Burckhard, *op. cit.*, p. 131 notes end of March 1813 "the bed of the river was almost dry between Assouan and the island of Elephantine, where I generally passed the morning". The same is reported by Steindorff in the diary (p. 138) of his travel to Siwa and Nubia (27. 2.1900).

[13] H. Jaritz/M. Rodziewicz, in: *MDAIK* 50, 1994, p. 117. It is very likely that it was this assemblage of reused blocks in the town wall, which was already seen and considered as a second temple by de Morgan, *Cat. des Mon.* I, p. 57.

Previous Research in Aswan

The earliest reports on ancient Syene come from the first European travellers who visited the site in the 18th century. The most precise descriptions of the few monuments visible at the ruined site such as the temple of Domitian, the fortification walls and the columns of a basilica are due to the work of F.-L. Nordon and Pococke, who visited Aswan in 1737 and 1743 respectively[14].

The temple of Domitian particularly attracted all later visitors, since it was thought to have been an observatory connected to the legendary well of Eratosthenes mentioned by Strabo. More than fifty years after the visit of Pococke the temple was partly buried and in 1801 W. Hamilton started an attempt to clean the building[15]. Another excavation was undertaken in 1817 by R. Richardson, who uncovered and destroyed the floor of the sanctuary in search for the well of Eratosthenes[16].

Some years later the main part of the temple was dismantled by the local Turkish governor, as were also two small temples of the New Kingdom in Elephantine[17]. The "many stones south of the mudereeyeh taken from the temples of eighty years ago"[18] copied by C. Wilbour in 1891 might originally derive from the temple of Domitian and indicate that not all blocks had been carried away[19]. After an attempt of R. Engelbach to uncover further reliefs of the remaining pronaos, resulting in the collapse of a modern house beside it[20], de Wit published the visible inscriptions[21] in 1960.

Apart from those few monuments visible since ancient times, all further discoveries were due to *sebbakh* digging or construction activities during the early days of modern Aswan.

The most prominent one was the discovery of the Isis temple, which was uncovered in 1871 during the construction of the railway connecting Aswan with Shellal[22]. The excavation, limited to the temple proper, was finished in 1902 by the Service des Antiquités who protected the eastern edge of the deep excavation pit by a massive mudbrick wall[23].

During the winter of 1895/96, *sebbakh* diggers working to the north of the English Church and to the east of the former railway station, uncovered part of a paved street with bases of statues at its eastern end[24]. Some excavations were continued on behalf of U. Bouriant by the Classicist Jouguet[25]. A further base for a statue of a certain Diadumenianus was discovered close by in 1904[26]

In the course of papyrus hunting in these early days of Egyptology, F. Zucker, who worked already on the *kôm* of Elephantine Island, received the concession for the *kôm* of Aswan on behalf of the Konigliche Museen zu Berlin in 1907[27]. Maspero, however, made it a condition for him to share the site with Clairmont-Ganneau and his French collegues as they had already done so on Elephantine.

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[14] Nordon, *op. cit.*; R. Pococke, *A Description of the East*, London 1743, pp. 116–118 and pl. 48.

[15] W. Hamilton, *Remarks on several parts of Turkey*. Part I. *Aegyptiaca*, London 1809, p. 66.

[16] R. Richardson, *Travels along the Mediterranean and parts adjacent*, Part 1, London 1822, p. 510.

[17] A. Mariette, *Monuments divers recueillis en Egypte et en Nubie*, Paris 1889, p. 6.

[18] J. Capart (ed.), *Travels in Egypt (Dec. 1880 to May 1891). Letters of Charles Edwin Wilbour*, Brooklyn 1936, p. 589.

[19] *Cf.* also H. Jaritz, in: *MDAIK* 35, 1979, p. 238 n. 12.

[20] R. Engelbach, in: *ASAE* 21, 1921, p. 195.

[21] C. de Wit, in: *CdE* 35, 1960, pp. 108–119.

[22] A. Mariette, *op. cit.*

[23] N. Reeves/J. Taylor, *Howard Carter before Tutankhamun*, London 1992, p. 57 and H. Carter, in: *ASAE* 6, 1905, p. 129.

[24] A.H. Sayce, in: *PSBA* 18, 1896, pp. 107ff.

[25] R. Cagnat, in: *CRAIBL* 24, 1896, pp. 37–45.

[26] *PSBA* 30, 1908, p. 74.

[27] W. Müller, in: *FuB* 22, 1982, pp. 8, 50.

Soon afterwards, differences with the local authorities arose, who started to level down the *kôm*. Zucker was informed by Weigall, the then Chief Inspector of Upper Egypt, that the Antiquities Service ceded 62 *feddan* to the *mudiriya*, who intended on behalf of the Ministry of the Interior to drive forward the improvement of the town, on the condition however that they avoid deep excavations and built only houses and streets (!)[28].

During earthworks in summer 1907, a *Dammweg* was thrown up to the north of the English Church and a lot of architectural elements and other finds became visible on the levelled plain, including parts of late Roman and Coptic columns, a late altar, a Latin inscription from the reign of Valentinian, Valens and Gratian, and further, an amount of fragments of hieroglyphic inscriptions and Egyptian reliefs[29]. In a short notice published in the *PSBA*, the latter were described as "the remains of an Egyptian temple" which "seems to have been erected by Ptolemy Philopater" and "subsequently repaired and enlarged by Tiberius, Claudius, and Trajan". The location was immediately to the east of the bases of statues discovered twelve years before[30]. Actually, it is not very clear whether an actual temple was discovered, which was "at a later date (...) converted into a Christian church" or the Ptolemaic blocks were found in the foundation of the church itself. With all certainty, however, the blocks are identical with those stored afterwards in the Isis temple and published by Pernigotti in 1978. All of them are half pieces of once larger blocks, having been cut in order to be reused in a secondary context. Subsequently these blocks were identified as belonging to a small temple located originally at Elephantine[31] and were transferred back to the island two years ago. From this evidence, the existence of a temple of Ptolemy IV Philopator in Syene is very unlikely and should be omitted from further topographical considerations[32].

During the resettlement of the site a great number of stelae and smaller architectural elements came to light, but no topographical details about their provenance are known[33].

In 1961 the Director of Museums of Upper Egypt, el-Hetta, undertook further excavations in the area of the Isis temple[34]. Two years later he discovered three Aramaic sarcophagi in a distance of 200 m from the temple[35], which might derive from some "37 graves of different periods" found close to the Cataract Hotel[36].

A serious publication work of the monuments of Aswan started with an Italian mission working in the Isis temple during 1971–1972[37]. Subsequently, all other known monuments of the town were published preliminarily by H. Jaritz (Swiss Institute)[38], who also carried out several survey campaigns in the area of the Isis temple between 1987 and 1993[39].

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[28] *Loc. cit.*, p. 14. Zucker applied to the Museum in 1908 for a continuation of the concession, but the next year his interests ceased, *cf. loc. cit.*, p. 50.

[29] *Loc. cit.*, p. 14.

[30] *PSBA* 30, 1908, pp. 73f.

[31] Laskowska-Kusztal, *Elephantine* XV, pp. 15ff.

[32] *Cf.* H. Jaritz, *On three townsites in the Upper Thebaid*, in: *CRIPEL* 8, 1986, pp. 39–40 and fig. 2.

[33] For example the stela of Ptolemy X Soter (later bought by Budge for the British Museum) and other Greek and Coptic inscriptions, *PSBA* 10, 1887, pp. 202–205; G. Lefebvre, in: *ASAE* 28, 1928, pp. 34f.; G. Lefebvre, *Recueil des Inscriptions Grecques-Chrétiennes d'Égypte*, Cairo 1907, pp. 103–108; A. Bernard, *De Thèbes à Syène*, Paris 1989, pp. 169–182.

[34] J. Leclant, in: *Orientalia* 31, 1962, p. 203.

[35] W. Kornfeld, in: *WZKM* 61, 1967, pp. 9ff.

[36] J. Leclant, in: *Orientalia* 33, 1964, p. 350. These excavations were caused by an infrastructure development programme in connection with the construction of the High Dam. In four seasons of work during 1960 until 1964 the medieval cemeteries south of the town were investigated and some parts finally removed and overbuilt; see A.M. Abd al-Tawab, *Stèles Islamiques de la Nécropole d'Assouan, Textes Arabes et Études Islamiques* 7/1, Kairo 1977, pp. v–vii.

[37] E. Bresciani/S. Pernigotti, *Assuan, Bibliotheca di Studi Antichi* 16, Pisa 1978.

Among various minor salvage works of the Inspectorate of Antiquities during the last decades, at least one discovery should to be mentioned in addition to the Roman shrine presented in chapter V. In 1997, illegal digging in a private house in Mohamed Nur Kasem (Shekh Saleh) Street in the district of el-Shouna brought to light a multiple tomb. It contained three anepigraphic anthropomorphic sarcophagi made of sandstone and can be dated preliminarily to the Ptolemaic Period. The significance of the tomb is based primarily on its location, since it is the first one known to be located north of the ancient town[40].

Overview of Work

The first season of the joint mission's work lasted from 18.10. until 17.12.2000 and continued from 16.01. until 30.03.2001. A second season, again conducted in the field by K.-C. Bruhn, was carried out from 03.11. until 20.12.2001, continued from 17.01. until 11.04.2002. Beside the authors of this report members of the mission in the first season were the archaeologists Hala Adel Mohamed, Mustafa Hassan Khalil and Clara Jeuthe, the architect Alexandra Druzynski, and the surveyors Christian Waldvogel and Stefan Ziegler. Members during the second season were the archaeologists Marzell Camenzind, Regula Gubler, Melanie Jonasch, Hala Adel Mohamed, Patrick Moser, Mustafa Abdel Shukur Salim and Clea Stanischewski, the architects Heike Lehmann and Jens Pflug, the epigrapher Jitse Dijkstra and the photographer Andreas Paasch.

In the first two seasons the main focus of work was the area of the Isis temple (area 1). Hand in hand with removing the debris of former excavations, all architectural remains of the domestic quarter south of the temple were recorded. A large collection of architectural elements of different periods collected over the past decades all over Aswan and stored in the fenced area and inside the temple was transferred to a magazine of the SCA. The excavations concentrated on the houses of the two latest building phases dating to the early medieval and late Roman Periods (chapter III). Furthermore, a complete register of all graffiti and dipinti in the temple was established and their documentation started.

In the second season work began cleaning the area of the temple of Domitian (area 3). The enormous amount of debris accumulated here during recent decades could easily be assessed by the fact that only the uppermost course of the remaining portico was still visible. Accordingly, it was decided to proceed with the help of a bulldozer and more than 4000 m³ of waste were removed (Taf. 15b). Finally the recording of the uncovered structures was started and a solid iron fence was erected on the eastern side of the area.

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[38] H. Jaritz, *Untersuchungen zum Tempel des Domitian in Assuan*, in: *MDAIK* 31, 1975, pp. 237–257; id., *Die Kirche des Heiligen Psoti vor der Stadtmauer von Assuan*, in: *BdE* 47/2, 1985, pp. 1–19; id., *Ein Bau der römischen Kaiserzeit in Syene*, in: M. Krause/S. Schaten (eds.), *Themelia* (*Fs* Grossmann), Wiesbaden 1998, pp. 155–165.

[39] H. Jaritz/M. Rodziewicz, *Syene – Review of the Urban Remains and its Pottery*, in: *MDAIK* 50, 1994, pp. 115–141 (hereafter cited as Jaritz/Rodziewicz, *Urban Remains* I); H. Jaritz/M. Rodziewicz, *Syene – Investigation of the Urban Remains in the Vicinity of the Tempel of Isis* (II), in: *MDAIK* 52, 1996, pp. 233–249 (hereafter cited as Jaritz/Rodziewicz, *Urban Remains* II).

[40] The documentation of the tomb was supervised by Chief Inspector Mohi el-Din. A closer report will be given in the next preliminary report.

In summer 1999 the SCA Inspectorate of Aswan stopped the construction work of a private house close to the Isis temple after a well constructed stone wall became visible. In the following excavation a small Roman sanctuary was uncovered (area 5), preserved up to the height of the uppermost courses of the walls. The still unclear legal situation of the houses adjoining the excavation area meant that it was not possible to perform any archaeological or consolidation work on the still well preserved building. The imminent collapse of the house walls on top of the unstable edges of the excavation pit will allow a continuation of work only after extending the excavation area. A first report on the sanctuary excavated in 1999 is given in chapter V.

Outside the registered antiquities areas three minor investigations were conducted. A very limited sondage necessitated by sewer installations in a street crossing south of area 3 (chapter IV), and the recording of an illegal digging detected some 70 metres north of area 1 contributed valuable information concerning the historical topography of the town. The latter revealed in a dangerous system of tunnels segments of fortification walls, dating presumably to the late Roman Period, preserved up to 7 m in height (chapter VI).

At the end of the second season the construction pit on the site of a former petrol station in the centre of old Aswan was investigated (area 9). Due to lack of time, work concentrated mainly on cleaning and recording the profiles at the edges of the large construction area. Architectural remains of two major phases of public buildings were recorded, covering the late Roman and Early Medieval Periods.

The depth of the construction pit offered a rare opportunity for soundings into the earliest occupation in this part of the town. In a limited trench, however, no man-made layers predating the late Roman Period were uncovered, but continuous accumulations of fluvial sediments. Thus it can be assumed that the western extension of the ancient town was only possible after a large-scale silting-up of the river shore, which had previously formed a large bay in this area (chapter VII).

C.v.P.

II. Topographical Survey of the Town Area

A main focus of the first season's work was to establish a reliable measuring system with fixed points within a map of the modern town. From February to March 2001 a team from the Confederate Technical University of Zurich (ETH) joined the mission conducting GPS as well as terrestrial surveying both in Aswan and at Elephantine to apply the new system to the grid of the German-Swiss mission working on the island.

The plain coordinate projection of the GPS-data has been set up referring to a point marked in the rock with a cross, just west of the German expedition house on Elephantine. Employing the WGS 84 the point is located 24° 5' 10.08985" north and 32° 53' 2.67597" east with a height of 108.82 m. In the local projection the point obtained the coordinates Y: 10.000 m (east) and X: 10.000 m (north). Its height in the system has been determined as 101.74 asl[41] by levelling, taking the datum of Elephantine which is derived from the modern Nilometer in the terrace of the Satet temple[42]. Fixed points marked with iron needles in concrete have been put up in areas under the administration of the SCA.

On that basis the streets and the outlines of the modern buildings in el-Shouna and Koka, which are the modern names of Aswan's districts overlying Syene, were surveyed and later used to project a

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[41] asl = above sea level. All levels mentioned in the text refer to this unit.

[42] The levels given in the figs. of Jaritz/Rodziewicz, *Urban Remains* I and Jaritz/Rodziewicz, *Urban Remains* II differ from the ones used now by –0.91 m.

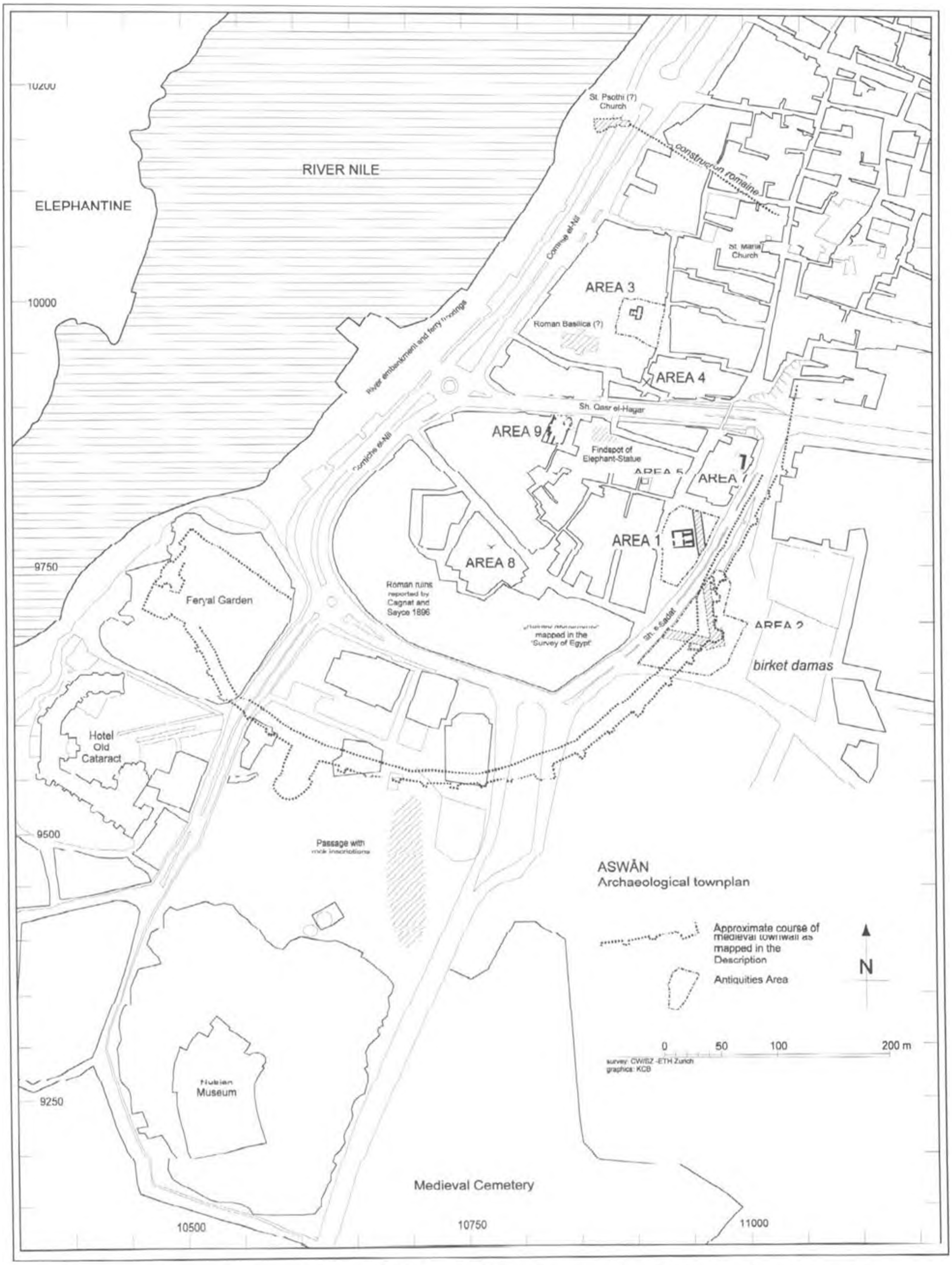

Fig. 1: Topographical map of the area of old Aswan including all ancient and medieval remains known at present

satellite image (Taf. 14) onto the plan. In combination with digitised older charts from official Egyptian sources the map published here (Fig. 1) has been drawn, including all ancient and medieval remains known by the end of the second season.

The system and nomenclature of the archaeological work is mainly derived from the one used by the German-Swiss Mission on Elephantine Island[43]. Areas within the modern town that underwent or are still under investigation are counted up to nine until the end of the second season.

All archaeological features as well as walls, house units and stratigraphical sequences are counted within each area. Rooms within houses are given in small letters. In case of a reference to items in other areas its number is given in subscript.

K.-C.B.

III. Domestic Structures Surrounding the Isis Temple (area 1)

The first two seasons focused on the larger habitation area south of the Isis temple (Figs. 2–3). After extensive cleaning it became obvious that most of the houses surveyed by JARITZ between 1987 and 1993 had been excavated to the base of the walls by the Egyptian mission in the 1960s[44] and were later reburied under a substantial layer of debris. In it some fifty objects were found including *ostraca*, accumulations of once complete pottery vessels as well as scattered decorated stone blocks, apparently deposited during the earlier activities. Excavations going hand in hand with a detailed documentation of the surviving architecture therefore were concentrated on areas helping to establish a reliable sequence of the settlement's main phases and their dating.

Unfortunately one important area in which JARITZ and RODZIEWICZ conducted excavations is not available for scientific study any more. The connection of the town wall to the settlement at their locus 3402[45] is lost due to a retaining wall, built during an enlargement of el-Sadat road a few years ago. On the other hand just east of the guard's house in the very south of area 1, entirely undisturbed strata just underneath the modern surface were met, compensating the deficit of information caused by the undocumented earlier excavations to a certain extent.

After two seasons of systematic research the tentative picture of urban development drawn by JARITZ and RODZIEWICZ has to be altered considerably. Nonetheless their stratigraphical investigations as well as their study of pottery samples still serve as the chronological backbone of the present analysis, as the systematic study of recent finds is only in its initial stage. Necessary corrections concern not only the stratigraphical sequencing within the architectural remains but also the numbering of houses, as the mission divided the region surveyed ten years ago into areas 1 and 2 and the counting of the houses was confined to each area[46].

The southern part of area 1 comprises an almost eight metres high sequence of civil architecture, promising to represent the main periods of Syene's urban development. The preliminary assumptions from the results concentrate on the three latest settlement phases, which can now be reliably separated within the remains of the living quarters south of the Isis temple (Fig. 4 a–c). The latest phase I is represented by Houses 6, 7, 8 and 12 the Egyptian mission excavated down to the foundation of the

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[43] *Cf.* VON PILGRIM, *Elephantine* XVIII, pp. 15–27.

[44] On the earlier archaeological expeditions *cf.* JARITZ/RODZIEWICZ, *Urban Remains* I, n. 1.

[45] House 5bis: JARITZ/RODZIEWICZ, *Urban Remains* I, p. 118, fig. 2.

[46] *cf. supra.*

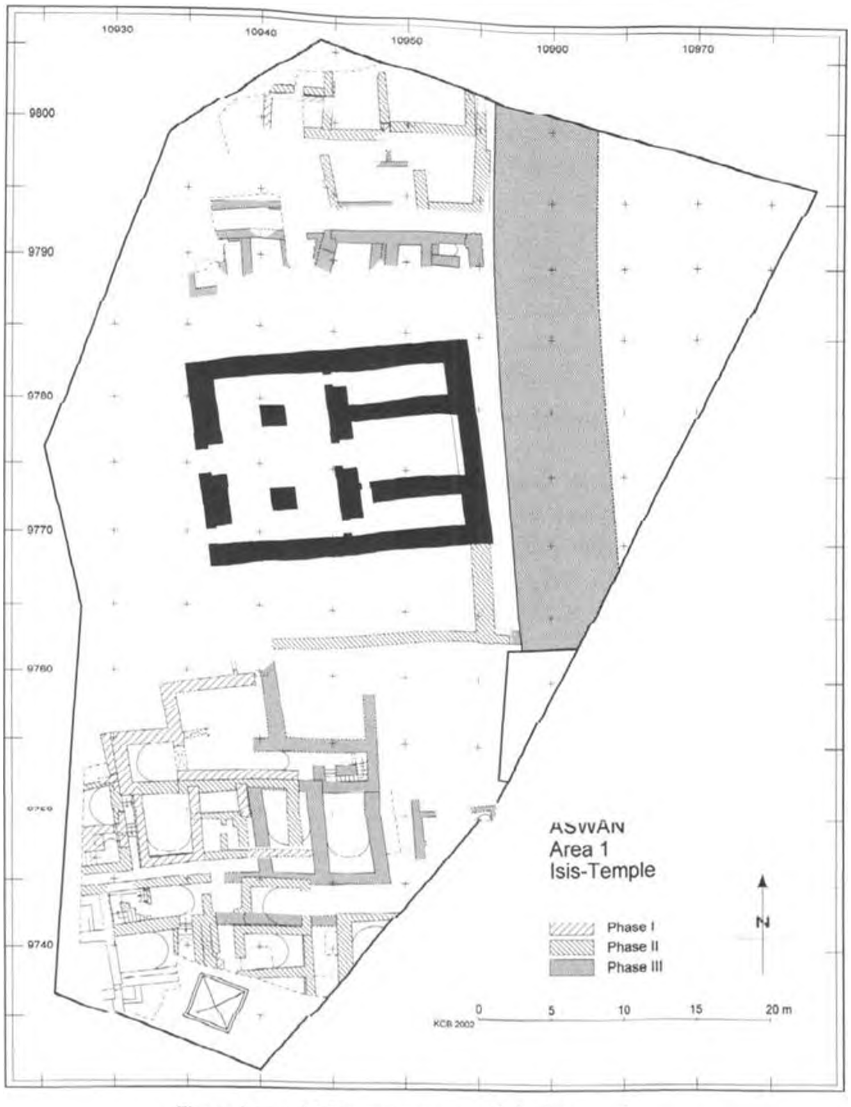

Fig. 2: Area 1. Living quarters around the Isis temple

walls in the 1960s. The same applies to the buildings of phase II (Houses 1, 2, 9, 10, 11), with the above mentioned exception near the guard's house. The defining of phase III (Houses 3, 4, 5) remains currently unclear, as the later structures cover its remains to a large extent. Although the examination of the pottery and the numismatic evidence is only in its very beginnings, the phases seem to embody a chronological frame from around the 1st century AD up to the 11th century AD. A period of around 1000 years divided into three phases indicates the preliminary character of the sequence. Especially Phase III – according to JARITZ' study lasting from the 1st to the 5th century AD – will have to be revised during future work.

Phase III (1st – 5th century AD)

House 5 has already been a subject of research, as there are corresponding structures known from other sites within the Nile Valley[47] and the date of its foundation in the 1st century AD is fairly well established[48]. Although recent excavation touched House 5 only on its southern and eastern limits, the evidence obtained in the current excavation allows a more differentiated description of its development (Fig. 4a).

The layout of the house with its two rectangular halls in the south (rooms a and b) and at least one large court north of it (e) can be ascertained. A staircase (d) not only connected the open area with the first floor but also gave access to the western compartments through a vaulted corridor (c). Trenches east of wall 34 and south of wall 27 show that the house was surrounded by streets around 2.2 m (south) and 2.00 m (east) wide. The larger passage is limited to the south by the contemporary wall 92 showing technical features identical to those of House 5[49], indicating a comparable building located there.

The residential dwelling nevertheless underwent some modifications. The relationship between the walls separating the halls on the ground floor (W 29) and the adjacent wall 32 is not yet observable, but its eastern counterpart (W 34) abuts on wall 35. The subsequent street layers attending especially its eastern side nevertheless verify the long time usage of House 5.

Contemporary structures neighbouring on House 5 are very vague to determine. The group of walls W 89–90/100 as well as walls 155–157 to the east of House 5 have not yet undergone closer investigations. In the adjoining western area the room numbered 6bis in JARITZ' plan[50] was found excavated already to a level almost equivalent to the foundation of House 5 (Taf. 17c). The chamber is surrounded by sequences of walls built on top of each other, but only wall 88 on its western border might belong to phase III. It is erected with substandard mudbricks in a significantly less regular manner than House 5. Its southern end is buried most probably under the not yet excavated passage between Houses 2 and 9. Currently also the northern limits cannot be determined, as it seems to have been cut by the southern wall of House 7 (W 48) in the early Medieval Period. As it seems unlikely that a dwelling similar to House 5 would have been torn down to such a low level, and because the neighbouring House 1 is well dated to the subsequent phase (II), it is reasonable to assume that the prominent residence either had additional open areas to its west or stood rather isolated within the town district south of the Isis temple.

Phase II (5th – 7th century AD)

In the 5th century AD, House 5 was abandoned and filled in up to the level of the upper floor's vaults[51]. The northern open court(s) seem not to be filled to a corresponding level, thus the area has been terraced to a height of at least three metres. Presumably contemporary with the remodelling of the settlement district south of the Isis temple in the 5th century AD House 1 was erected just west of wall 88[52], leaving a passage of only 0.74 m. The old wall in the east was raised several courses (W 64)

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[47] *Loc. cit.*, n. 7; JARITZ/RODZIEWICZ, *Urban Remains* II, pp. 233f.

[48] JARITZ/RODZIEWICZ, *Urban Remains* I, pp. 121f.; JARITZ/RODZIEWICZ, *Urban Remains* II, pp. 237f.

[49] Described by JARITZ, *op. cit.*

[50] JARITZ/RODZIEWICZ, *Urban Remains* I, fig. 1. Corresponding with House 2a in fig. 4b here.

[51] JARITZ/RODZIEWICZ, *Urban Remains* II, p. 240.

[52] An imported Tunisian Sigillata (HAYES 74) out of the foundation trench of W 56 gives a *terminus ante quem* in the 2nd half of the 5th century AD (kindly communicated by M. MACKENSEN, Munich).

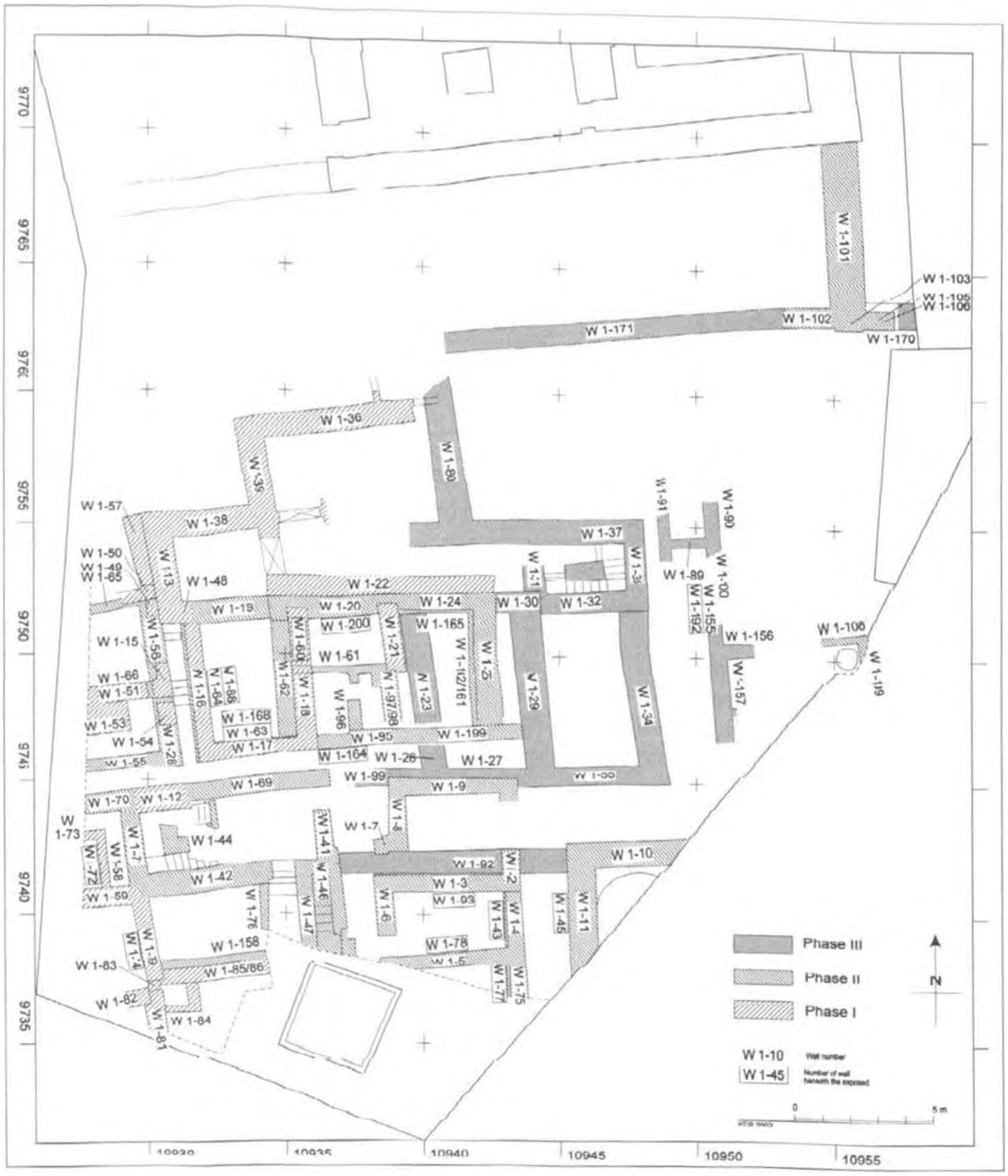

Fig. 3: Area 1. Plan of the walls exposed south of the Isis temple

and the passage provided the connection between the two terraces by means of a staircase, which was later rebuilt on an increased level (Fig. 4b).

Of its initial phase a flight of three steps is preserved, built of mudbrick, which presumably served as a foundation for a solid staircase laid with stone slabs. These might have been reused in a later renovation of which only two sandstone steps connected by upstanding fired bricks were observable, as it runs underneath wall 48 of the early Islamic House 7 (Taf. 16d).

House 1 is outstandingly well preserved. The vault of room a is still in place, affected only by a small modern hole in its vertex near the limits of the excavation (Taf. 16a). The clay floor on top of the vault, resting on a bed of one layer of mudbricks, has been renewed several times and is disturbed by a later intrusion down to the bottom of the spandrel in the north. The lower part of the southern spandrel was found undisturbed, filled with disused bodies of transport amphorae covered with very fine ash, light grey to brick-red in colour, up to the vertex[53]. The vault is built of a single row of upright bricks tempered with straw. They are covered by a layer of mudbricks entirely coated with clay mortar on their surface.

As the house reaches the limits of the area and may well continue underneath the modern street nearby, the investigation of the vaulted room was restricted to a minor extent. Samples of the soil filling the room to a level of around 0.8 m underneath the vertex were taken. It was very sandy in character and contained few inclusions. South of room a is a staircase, later filled up and used as a chamber in the basement of House 8 (Taf. 16b). It leads either to the western half of wall 66 accessing room a or to another room south-west of it.

The terrace on top of House 5 served as a building ground for House 2, which can only be traced at present and was not subject of closer examination yet. Its western room a is delimited by wall 19, built of reused stones, some of which carry decoration in sunken relief. Its northern face is nicely coated with lime mortar, contrasted by the southern face built in a rough manner, suggesting that the wall served as the western continuation of the terrace formed by House 5. In its crown irregular holes, up to 0.5 m wide and 0.9 m deep, were left open during construction, most probably once carrying poles for a temporary fence made of ephemeral material (Taf. 17c). Therefore room a most probably served as an open court.

The passage in between Houses 1 and 2 ends in a narrow street oriented east-west leading to another small open court. Its pavement, consisting of irregular flat stones and reused blocks of domestic use, is not preserved to its northern end (Taf. 17b). The court gives access to both Houses 9 and 10, which might have been separated only in their initial phase, later being unified to a larger complex (*cf. infra*).

House 9 contains the evidence for the dating of the end of phase II to the 6th/7th century AD rather than into a much later period[54]. Room c has been subject of excavations in the 1960s. The oblong room with the entrance in the north of its eastern wall, where the slabs with traces of the door-post are still *in situ*, allows access to the roof or a second storey by means of a three-flight staircase at its western end. The steps are laid in the manner known from contemporary houses on Elephantine[55] and echo the construction of the later staircase east of House 1 with fired bricks supporting the stone slabs (*cf. supra*). Limited excavations where conducted along the southern wall 42 without meeting a floor-level. The exposed lowest step of the above mentioned staircase is at a level of 102.20 m hence the short flight of steps leading into the small chamber in the north-western corner underneath the uppermost flight of the staircase starts at a level of 102.50 m, suggesting that it is a later alteration during the subsequent rise of the floor-level during a prolonged use of the house. A doorway in the eastern half of the southern wall leads into the lower room b. The six steps made of sandstone slabs are contemporary with a small wall (W 76) restricting the access of the room to a small opening furnished with a threshold (Taf. 17a). This modification took place not long before the collapse of the wall delimiting the room in the south (W 158). This is suggested by only one thin clay floor abutting on W 76 on which the vault fell, completely burying the contents of room b. The debris of the collapsed vault is covered by a packed layer with long thick strips of charcoal, deriving mainly from brushwood. The stratigraphy is sealed by a thick layer of debris, dumped on top of the destroyed remains up to the crown of W 42, which suffered little from the collapse, being tipped only somewhat to the north. As the ash layer is stuffed with complete though broken vessels and mixed with collapsed mudbrick material, it should originate from the roof or a second storey chamber. In view of the well preserved western and northern wall of room b, the setting of the ground, an earthquake or a heavy rainfall should be considered as the cause of the house's destruction.

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[53] The use of ash for the filling of spandrels is still not uncommon in the contemporary local architecture (personal observation).

[54] *Cf.* JARITZ/RODZIEWICZ, *Urban Remains* II, fig. 1.

[55] F. ARNOLD, in: *MDAIK* 55, 1999, pp. 149f.

The contents of the room on the uppermost floor level have been unearthed *in situ*, except for damage to the vessels caused by the collapsing vault (Taf. 16c). The room was used for storing not only provisions but also the vessels themselves, as is suggested by many plates and bowls piled up irregularly on the floor. Along the walls and at the edges, amphorae and other larger equipment were leaning, most of the items either empty or formerly filled with liquids. Noteworthy small finds are rare. Within the collapsed wall 158 some fired bricks covered a faience amphora, seriously affected by the circumstances, but complete. The outside of its body is decorated with small leaves in relief composing larger vegetable forms and set off by a light blue colour from the much darker surrounding surface[56]. The neck and the handles are missing; probably they were not attached to the vessel any more due to long use of the amphora. This would also explain the discrepancy between the well established dating of this type of faience-vessel into the 1st/2nd century AD[57] and the archaeological context in which it was found in House 9. Near the amphora a circular seal[58] without handle was found, made of two attached wooden discs (diam. 3.8 cm) depicting a palm-tree on the one and another floral motive on the other side. The context of the faience amphora and the seal suggests they were being stored in a niche in the northern face of wall 158.

The abundant pottery is only very preliminarily studied, suggesting a date for the collapse of the vault in the very late 6th up to the 1st half of the 7th century AD.

The stone pavement outside room c passes onto House 10, which has undergone extensive rebuilding. At a yet undetermined date rooms a and b were enlarged some ten centimetres to the east by means of demolishing walls 43/77 and erecting walls 4/75 on top of them, set off into the street adjacent to the house on the east. The wall's foundation trench is cut 0.75 m into the street layers, demonstrating the difference in level inside and outside the house, where a clay floor had been laid just on top of the demolished walls. A staircase has to have lead to the doorway in the south-western corner of room b, as the threshold is on the level of the street layers cut for the erection of the renewed eastern wall.

Room c is part of the rebuilding of House 10 sharing wall 3 for the vault support of both rooms b and c. It claims an area formerly serving for dumping waste and other domestic purposes in the location between the earlier House 10 and Houses 2 and 9. But it does not close the passage, rather it restricts the access from the street east of House 10 to the paved passage in the west. Unfortunately the stratigraphical relationship between wall 6 and wall 46 opposite the western passage became lost during earlier excavations. Therefore it can only be concluded that alterations at the eastern wall of House 9 are elements of the same rebuilding activities described above. There the former eastern wall of room b was transformed into a staircase leading up to the roof or second floor of House 9, being accessible from the passage directly opposite the exit of House 10b. The unifying of two houses into one larger dwelling complex even derived on weak evidence offers a valid explanation of the observations accomplished so far.

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[56] In shape, colouring and decoration it very much resembles an example today in the Royal Ontario Museum, Toronto: Inv. No. 910.108.365: *cf.* G. Grimm, *Two Early Imperial Faience Vessels from Egypt, Miscellanea Wilbouriana* 1, Brooklyn 1972, fig. 3.

[57] M.-D. Nenna/M. Seif el-Din, *La vaisselle en faïence d'époque gréco-romaine. Catalogue du Musée gréco-romain d'Alexandrie, Études alexandrines* 4, Kairo 2000, pp. 351–361, fig. 3.

[58] Inv.No. 2-1-23-15/4.

Phase I (post 7th century AD)

The architecture of early Islamic structures is fairly well preserved, especially House 7 north-west of the terrace formed by the then long uninhabited House 5 (Fig. 4c). The considerable difference in foundation levels between the latest buildings north and south of wall 19 as well as the erection of a retaining wall supporting the terrace (W 22) verify that at least 700 years after the erection of House 5, its formative character for the regional topography was still lasting.

The chronology of the area's latest phase of development is based on Rodziewicz' examination of pottery extracted out of wall 36, dating to the 9th/10th century AD[59] and the preliminary examination of pottery collected in a chamber (House 8, room a) found intact (Taf. 16b), suggesting a date in the 10th/11th century AD for its last use. The most prominent feature of this architectural phase is the use of noticeably dark, small mudbricks (26 x 12 x 6 cm), very hard in character, containing a high portion of sand and laid in contrasting bright, even harder mortar. The best examples are preserved in the northern and western walls of House 7a (W 13/38). The latter was cut for the addition of wall 39, which is contemporary with the well dated wall 36. Wall 13 and its corner to wall 48 not only overlie wall 56 of the earlier period but also close up the passage east of House 1 (Taf. 16d). The masonry therefore is specific for the period between the 7th and 11th century AD.

Whether some of the older houses were kept in use is hard to establish. House 2 was definitely demolished and replaced by House 6. Its westernmost room a still uses the older walls as a foundation, now roofing the area probably for the first time with a vault. But it is rather unlikely that this vault served as a ceiling, as the vault starts at the base of wall 18 and the room underneath would have been inaccessible from either side. More likely, the vault could have served as a solid platform for walls to build over. House 6 is built with the same mudbrick material as House 7, but changes the masonry for bricking up roll-locks in between courses of headers and stretchers.

In House 12 older structures have been re-erected and incorporated into a new dwelling. The walls surrounding the adjacent room west of the former House 9c have been robbed out almost completely in modern times; only the southern wall survived (W 59). Its northern face was coated with lime-plaster and a sequence of walls dividing room e into smaller compartments demonstrates the ample use of the building. South and east of room e the floor levels were much higher, as the collapsed House 9 was filled up and used for new buildings, parts of which were exposed directly under the modern ground level, again with lime-plaster on the outer face of wall 84 and the eastern side of wall 81.

The walls around the preserved vault of House 1 were raised with some crude and narrow walls, maybe already reusing the prominent mudbricks described above. The lower flight of the staircase in room 1b was closed and the remaining chamber filled with loose debris, mainly fragments

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[59] Jaritz/Rodziewicz, *Urban Remains* II, p. 241.

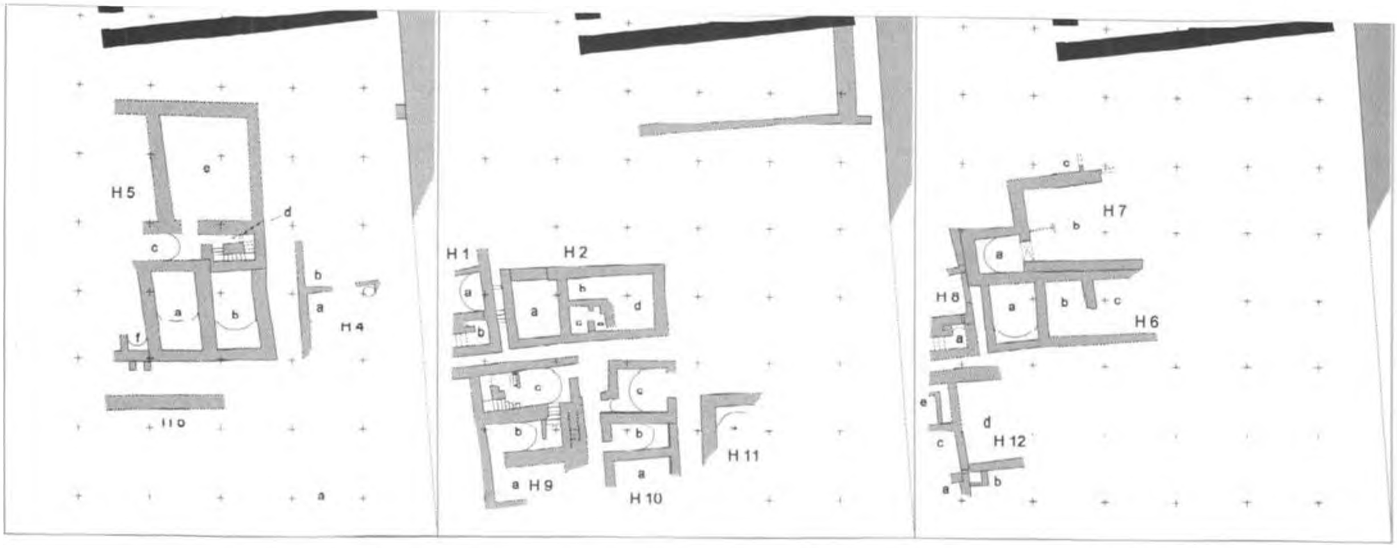

Fig. 4: Area 1. Main phases of occupation south of the Isis temple. a) Phase III (pre 5th century AD) b) Phase II (5th–7th century AD) c) Phase I (early medieval)

of fired bricks. These were also used for a poorly executed pavement, on which two amphorae and a baking plate were deposited surrounded by blown-in sand accumulated after the abandonment of the room.

K. C.B.

IV. Early Islamic Remains at Sh. el-Mahgamma (area 4)

In January 2001 the mission was informed about the renewal of waste water pipes at the crossroads of Sh. Mahgamma and Sh. el-Shouna. As the area is situated south of area 3 and east of where the mid-Roman basilica is believed to have been located, archaeological investigations have been undertaken in consultation with the City Council of Aswan from the 17th to the 21st of January.

An oblong trench, measuring 6 m in length and 2.5 m at its widest has been excavated more than two metres deep. Several cables and disused pipes finally limited the area to a narrow strip along the northern, western and southern edge of the trench (Fig. 5). The north was deeply disturbed by a drain shaft. Just east of it the lower part of a granite-column (diam. 52 cm) slanting to the north-east was sticking out of the section, being nicely flattened on the surface but having some major fractures at the exposed end. In craftsmanship, material and diameter the column repeats the examples known from an area just around sixty metres west of area 4[60], now being stored at the Isis temple[61]. The column is not

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[60] H. JARITZ, in: M. KRAUSE/S. SCHATEN (eds.), *Themelia* (*FS GROSSMANN*), Wiesbaden 1998, pp. 155–165.

[61] Two columns and one rectangular pillar were removed from the original site several years ago. One complete example has the dimensions: 48 cm (upper dm.), 51 cm (lower dm.) and 4.12 m (height).

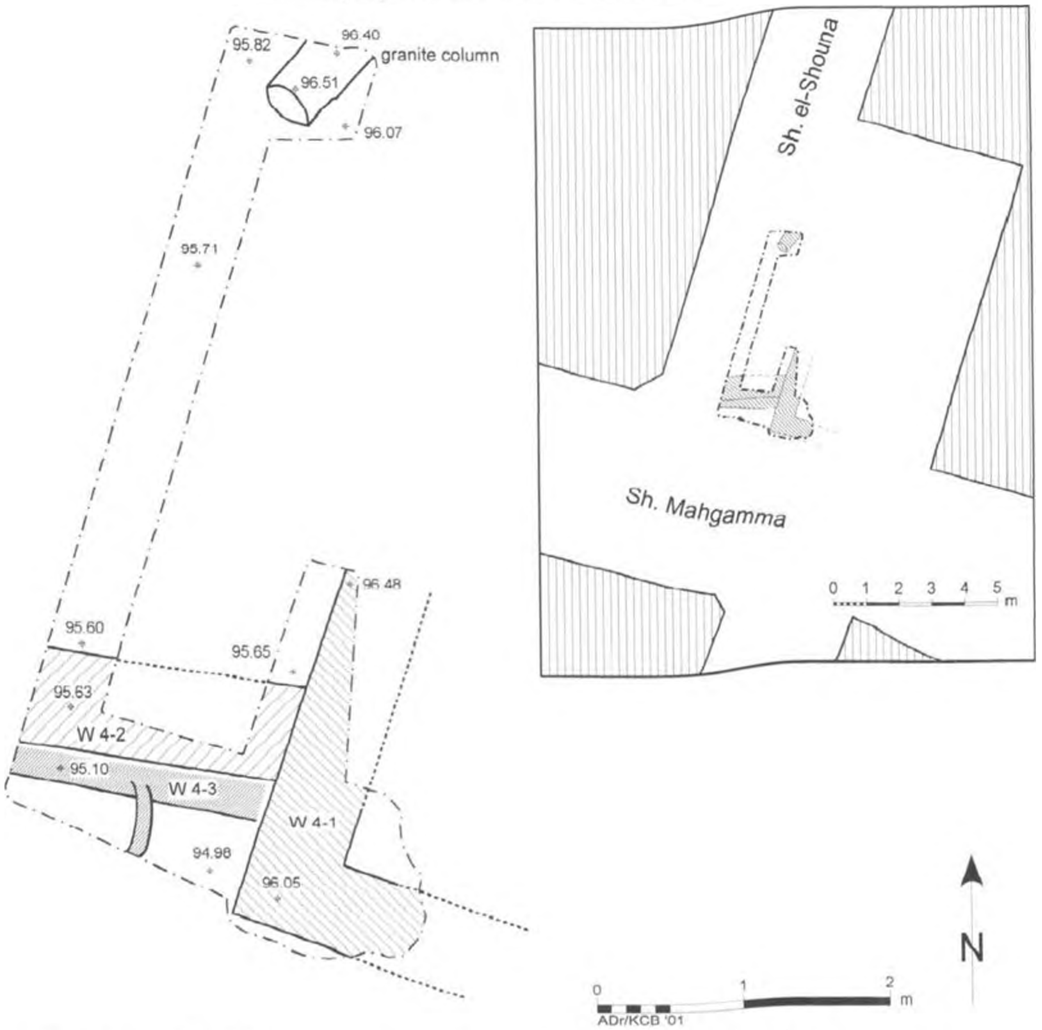

Fig. 5: Area 4. Plan of the rescue excavation with remains primarily dating to the early Islamic period

in situ, thus providing no evidence for the dimensions or layout of the building it belonged to, but it should have been part of an official building in the centre of ancient Aswan.

In the south-eastern corner, the edge of a 0.7 m thick mudbrick wall resting on a base of rough stones, at least one metre high (W 1) has been brought to light. At a slight angle another somewhat narrower wall (W 2) abuts on wall 1 some 0.9 m north of its corner, built of mudbrick in the uncovered upper three courses. The foundation trenches of both walls cut the older wall 3, running almost parallel to wall 2 set off a little to the south. In the middle of the exposed part a piece of an arch construction joins wall 3 (Taf. 18c). As the ground was heavily affected by the leaky pipes the mudbricks especially of wall 3 were merely traceable in their outlines, hence the interrelation between the arch-fragment and the wall was indiscernible. It may well not belong to the construction of the wall, rather being debris used for filling the room south of wall 3.

Although none of the walls described above was excavated down to the bottom, the foundation trench cutting wall 3 as well as the stone base of wall 1 points to a construction level not much deeper than the level of 94.98 m reached, which is considerably lower than the floor level of the Domitian temple (around 98.70 m) seventy metres north of area 4 and unexpectedly close to the level of the annual Nile flood[62].

The pottery sampled at the rescue excavation only suggests an idea of the period of construction, as the extent of disturbances caused by the several water facilities was not always detectable. Presumably undisturbed strata on top of wall 3 suggest a 7th–9th century AD date for the erection of wall 1 and wall 2. Abundant material found in the entire trench dating to the 5th and 6th century AD might reflect building activities of which wall 3 could have been part of.

K.-C.B.

V. The 'Roman Shrine' (area 5)

In 1999 the local Inspectorate of the SCA investigated a site after a well built wall of sandstone blocks came to light during building activities around 45 m north-west of the Isis temple (Fig. 6). In one season's work a small chapel dating to early/mid-Roman times as well as later domestic mudbrick structures were excavated[63]. The chapel bears a strong architectural resemblance to Roman 'classical' architecture uncommon in Egyptian urban contexts and its topographical setting increases our knowledge of the general layout of Roman Syene.

The area was divided into two parts during the investigations (Fig. 7). The shrine occupies the northern part. Its sidewalls as well as the columned front border the edges of the pit. The inner chamber was excavated down to the floor. A small sounding in a disturbed part of the pavement supplies a *terminus post quem* for the erection of the building in the late Hellenistic/early Roman period, based on a preliminary examination of the pottery[64].

In the part south of the shrine a 5 x 3 m long trench, with a 2.5 x 1 m eastern extension in the north, yielded traces of two domestic mudbrick structures abutting on the shrine. A wall of a third dwelling was exposed south of an east-west running narrow street.

Due to the very good condition of the shrine, the local authorities undertook all necessary steps for an official expropriation of the land. Until then a closer examination and restoration of the structures are impracticable because of the neighbouring houses, partially tumbling into the excavation trenches (Taf. 18b).

Description of the Shrine

The building measures 6.1 m by 4.5 m and is orientated almost north with a deviation to the east of 2.5° only. The open front shows two columns *in antis* giving access through a 2.11 m wide central entrance. The outer intercolumnia are much narrower (1.49 m) and were originally closed by means of a

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[62] S.J. SEIDLMAYER, *Historische und moderne Nilstände. Untersuchungen zu Pegelablesungen des Nils von der Frühzeit bis in die Gegenwart. Achet. Schriften zur Ägyptologie* A 1, Berlin 2001, p. 104 assumes an average post 2nd century AD flood near the mark of 93 m.

[63] The work was supervised by ADEL KELANY under the responsibility of ABDEL HAKIM HADDAD from March to August 1999. The area was preliminarily labelled DR 99.

[64] We owe our thanks to M. RODZIEWICZ who provided us with this information.

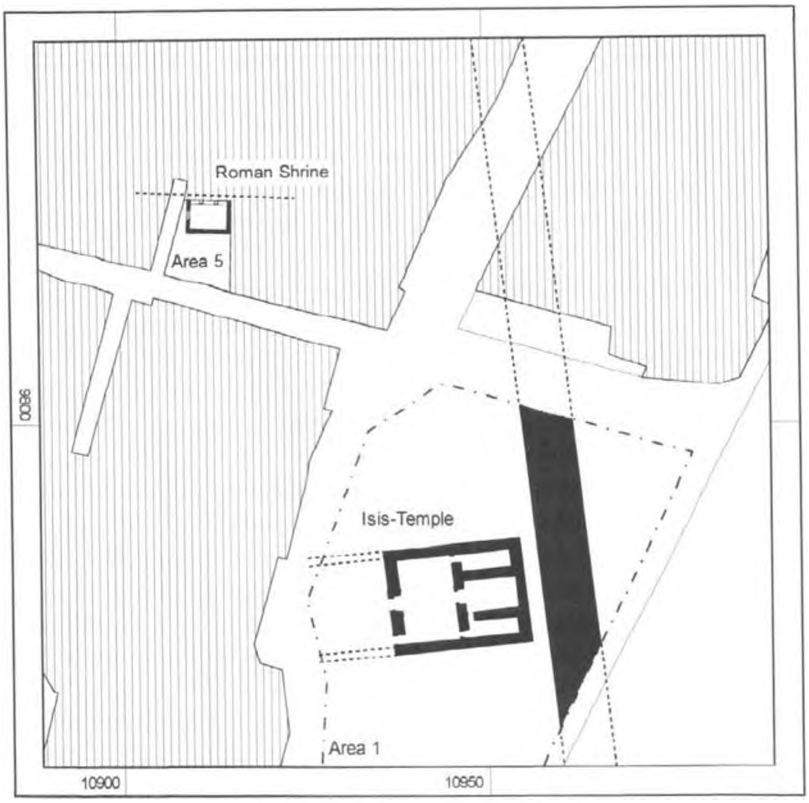

Fig. 6: Topographical setting of area 5

screen, as suggested by holes both at the inner sides of the *antae* and in the columns[65]. A doorway, later blocked with rough stones, leads to the west outside the building (Taf. 18a), whether to an open court or into another chamber is unclear; the visible south-western edge of the shrine nevertheless shows that no similar structure is connected on this side of the building.

The chapel is built of well cut rectangular blocks of local sandstone quite regular in size, set in horizontal courses with mostly vertical joints and wooden dovetail cramps, one still visible *in situ*. Originally ten courses varying in height were crowned by a moulding, traces of which are preserved at the inner south-eastern corner. The upper three block layers of the other walls are missing, partly removed already during the domestic use of the building, as later mudbrick structures on top of the north-western corner imply. The inner walls are nicely finished, showing traces of at least two layers of painted plaster. The uppermost layer is just well enough preserved at the western wall to outline a band composed of a yellowish checkerboard pattern on blue ground bordered by red, white and green stripes. The stones of the south-western corner show severe damage caused by burning. Only in the upper part the surface with a coating of white plaster is preserved, on which several graffiti are partly visible.

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[65] At the *antae* the holes are arranged regularly, alternating on either side of two painted vertical red lines, running parallel at the middle of the *anta* in a distance of approximately 10 cm.

The chapel's pavement is laid of regular sandstone slabs. Several intrusions, damages and repairs prevent a coherent interpretation yet. Noteworthy though is a feature in the pavement in the middle of the rear wall. The slabs delineate a rectangle, later filled with rough sandstone blocks. At the foot of the wall a shallow cutting corresponds to the former pit, which might have served for the foundation of an altar or base. The suggestion of an image or altar as the focus of the building is finally supported by a clearly outlined darker surface of the wall above the mentioned features. The former purpose of a deep round cutting (diam. ~35 cm) in the seventh course of the chamber's rear wall, clearly off the building's axis to the east, is as yet unclear.

The decorative front of the building is emphasised by the use of local granite for the bases, columns and the frieze. The bases, resting on a slightly higher row of foundation blocks are of familiar attic type with a flat plinth (Taf. 18a)[66]. None of the columns is completely preserved. The western is broken in the middle; the upper part had fallen into the inner side of the shrine, where it was excavated still lying *in situ*. Of the eastern column only the neck is missing, being cut off most probably during the removing of the capitals.

Only one block of the entablature was found, lying on rubble above the north-eastern corner of the building close to the modern surface level (Taf. 18b). Most probably it was reused as a foundation block during the erection of the modern house that formerly covered the site. Nevertheless it seems not to have been moved far off its original position as it is a corner block of a triglyph-frieze originally crowning the mentioned corner. A frieze continuing along the outer side walls substantiates the argument for the shrine as a stone building within neighbouring mudbrick structures, already suggested by the visible south-western edge.

The well executed masonry and the carefully painted decoration as well as the pretentious architecture both in style and material, underline the outstanding character of the 'Roman Shrine'. As a common type in 'Mediterranean' architecture, it should have served religious purposes within a public surrounding. The graffiti especially promise to give further details on the character and the tenant of the cult. The closest parallel of the building, different in size and quality though, is the nearby Augustus temple on the island of Philae[67]. Built in the 'classical' Roman tradition it is not connected to the nearby temple complex, rather dominating its surroundings with an open court in front of it. As in Syene, the temple was built in local sandstone but furnished with a front made of diorite, basalt and granite. The 'Roman Shrine' in fact also shows no topographical connection to the nearby temple of Isis. It differs in orientation by 5° and opens to the north, thus suggesting a focus on another main topographical feature within the Roman town of Syene. Whether this was a public place, a main street running down to the harbour or a processional road leading to a yet unknown temple (the 'Roman Shrine' rather resembles chapels like those in Dendera[68], Luxor[69] or Saqqara[70]) is open to future research.

[66] Type 5 in PENSABENE's system: *cf.* P. PENSABENE, *Elementi architettonici di Alessandria e di altri siti egiziani, Repertorio d'arte dell'Egitto greco-romano Ser. C*, Vol. III, 1993, p. 573, esp. cat.-no. 714 pl. 81.

[67] L. BORCHARDT, in: *JDAI* 18, 1903, pp. 73–90. For suggestions on the topographical context and the cult *cf.* H. HÄNLEIN-SCHAFER, *Veneratio Augusti. Eine Studie zu den Tempeln des ersten römischen Kaisers*, Rom 1985, pp. 219–222.

[68] G. CASTEL/F. DAUMAS/J.CL. GOLVIN, *Les fontaines de la porte nord, MES* 2, Kairo 1984.

[69] J.-CL. GOLVIN, in: *BIFAO* 81, 1981, pp. 115–148.

[70] J.-PH. LAUER/C. PICARD, *Les statues ptolémaïques du Sarapieion de Memphis*, Paris 1955, pl. 17.

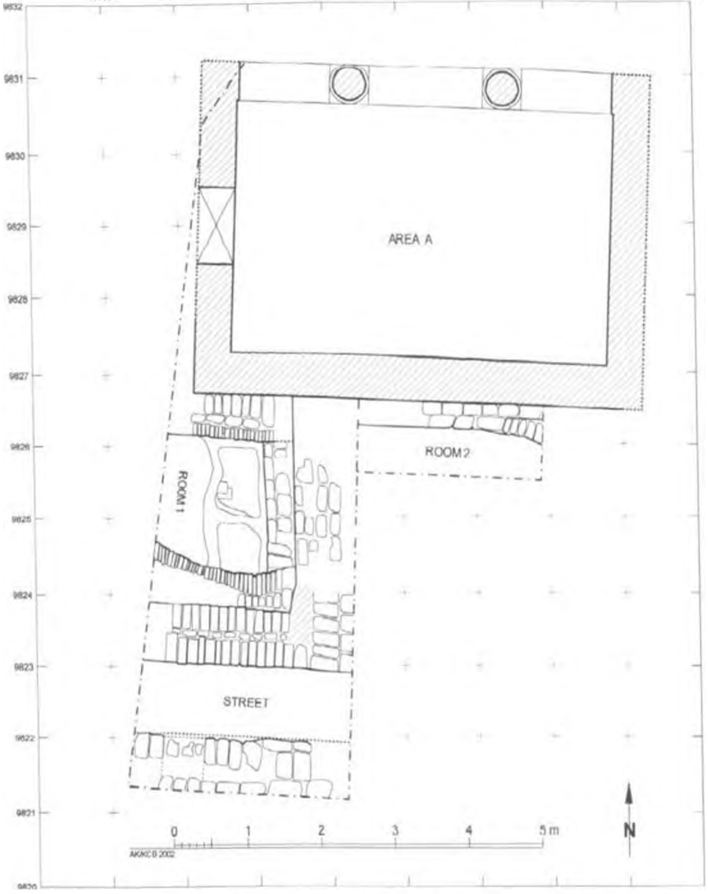

Fig. 7: Area 5. Plan of the remains uncovered in 1999

Reuse of the Shrine and Later Neighbouring Structures

Several traces of the later reuse of the building are to be found. The outer intercolumnia of the front were blocked with large sandstone-slabs set in lime-mortar after both columns dropped slightly to the north (Taf. 18a). An earthquake that damaged the chapel without causing it to collapse might have made these measures necessary. As the central entrance seems to have been blocked later by means of a rough wall built of fired bricks resting on a layer of dump, the cult may well have continued after the first tremor. The blocking of the side entrance nevertheless evidences a change of the spatial organisation of the cult. The final destruction of the shrine should be connected to the collapse of the western column, as is suggested by its archaeological context (*cf. supra*).

A row of rectangular cuttings in the upper half of the shrine's rear wall might have served beams supporting a second storey of a later building within the shrine. The chronological relationship of these later additions to the mudbrick-dwellings south of the shrine cannot be given at present.

A.K./K.-C.B.

VI. Late Roman Remains at Sh. Kasr el-Hagar (area 7)

At the start of the second season an illegal excavation was investigated in a house at the corner of el-Sadat road and the Kasr el-Hagar street, situated some 85 m north-east of the Isis temple. A shaft almost seven metres deep leading into a group of tunnels, most of which were already refilled, had been dug through high layers of predominantly medieval debris (Fig. 8).

The southern face of the shaft that measured 1.5 m square was formed by a wall (W 1), the crown of which is preserved to a height of only one metre below modern ground level (Fig. 9a). The upper two metres of the wall are built of twenty-seven courses of mudbrick[71]. The lower part of the wall underneath the mudbrick is built of sandstone blocks, roughly worked into rectangular shapes and unevenly flattened on the surface. They are laid in nearly horizontal courses, showing more careful masonry in the lower portion. Where the differing sizes of the stones cause steps in lateral joints, smaller stones – occasionally of granite – were used for filling. The twenty courses are laid in clay-mortar and show an inclination of thirty centimetres. They are resting on a socle of five more courses of identical structure and material, although not inclined but set off some ten centimetres from the upper compartment.

In the one tunnel still open leading westward along the socle, two modern openings were broken through the wall. The eastern opening which is not very deep has an intramural connection to a third breach in the upper part of the stone wall, also modern in character. The westernmost cut has been broken completely through the socle exactly at the foot of the wall, indicating a depth of 2.4 m at the bottom and 2.2 m on top of the socle.

On the other side of the wall the tunnel leads back 2.3 m in an easterly direction, finding its end in another wall (W 2), seeming to be rougher in character. But because the tunnel was less than 1 m high investigations were limited to a much smaller extent here. The tunnel bends southward and runs along wall 2 ending after 9.6 m without any evidence of other buildings.

Stratigraphical observations on a limited scale were conducted on the western face of the shaft as well as at the foot of the wall, where the tunnel cuts the lower four courses of its masonry. At the shaft the humidity of the earth allowed a division of only the general characteristic changes between thick layers of debris, very loamy in character, with some lenses of pottery, presumably pointing to a use of the area as a waste dump (Fig. 9b). At least four finer more sandy strata containing stone-chippings, charcoal and a distinctively higher number of potsherds divide those layers. A preliminary examination of the ceramics retrieved from these strata points to a post-Roman date for the subsequent rise of the ground level at the outer face of W 1.

The much smaller section at the foot of the wall supplies information on the date of erection and allows the first general considerations on the architectural interpretation of the structure. The wall does not seem to have a deep foundation. Most probably only the lowest course of stones resting in homogeneous sandy soil with few inclusions served as the base of the wall at a level of 93.20 m. As the socle is only five courses high and the step to the upper stone compartment was surely visible, the original ground level of the area surrounding the wall was presumably not higher than the second stone course. The following strata abutting on the wall are fillings of debris; evidence of characteristic subsequent street layers or remnants of any pavement are missing. Therefore the wall seems not to be closely incorporated into urban architecture, rather marking a border to an area used as a waste dump. The pottery suggests a post 5th century AD date for the erection of the wall.

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[71] 26 x 7 x 12 cm. Due to the humid soil under the modern settlement it is impossible to give a more detailed description of the fabric of the mudbricks.

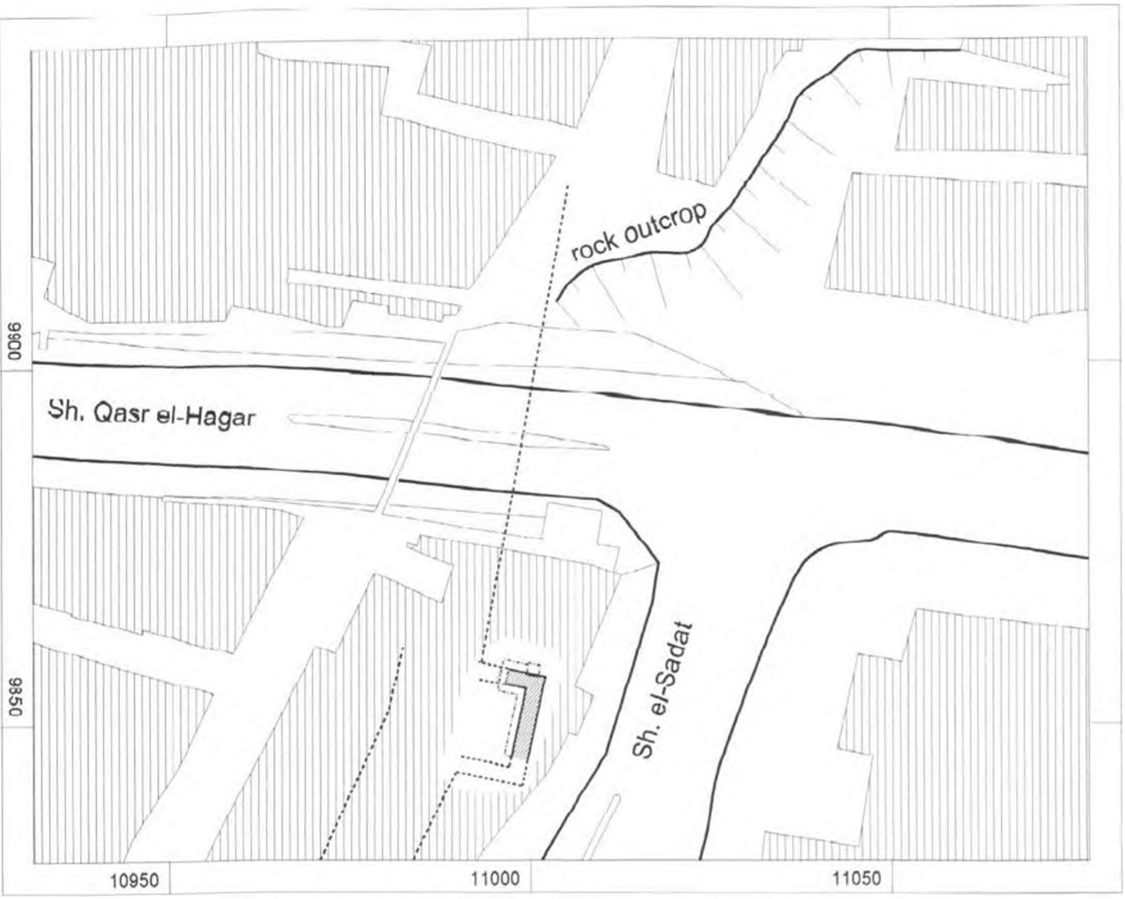

Fig. 8: Area 7. Location of the investigated remains within the modern town plan, giving a tentative reconstruction of the course of the Byzantine city wall

A limited excavation conducted by the mission at the bottom of the shaft to the east finally proved that the walls 1 and 2 form a corner and that the eastern side of wall 2 shows the same inclination as wall 1. From the evidence available, the structure has minimum measurements of twelve metres north-south and six metres east-west. Assuming an inclination of the wall on both sides, the preserved crown of the upper mudbrick compartment would still measure around one metre.

The foundation level of the wall is less than 1.5 m above the average annual Nile flood, which might have been even higher at the time when the wall was erected[72]. As already noticed in area 4, situated much closer to the river bank, rather late building activities were carried out on a remarkably low level. The walls of area 7 confirm this also for the easternmost town area.

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[72] *Cf. supra* n. 62.

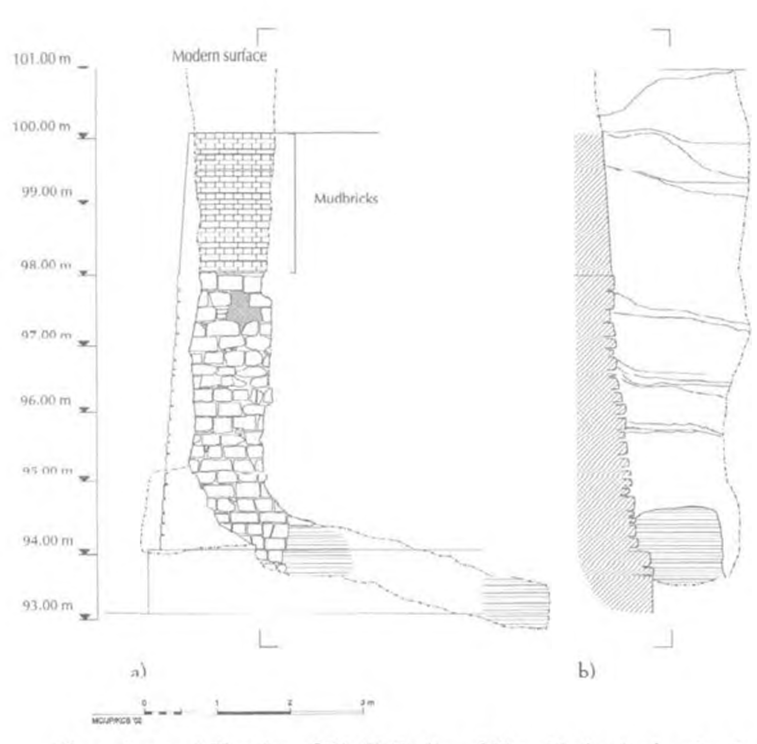

Fig. 9: Area 7. a) Elevation of W 1 b) Outline of W 1 with sketch of section S 1

In a wider perspective the construction of the wall finds a good comparison in the western tower of the Anba Hadra monastery close to the opposite bank of the Nile assumed to date to the 8th century AD[73]. As a part of the monastery's enclosure wall it encourages a comparative interpretation of the structure in area 7 as being a corner of a tower attached to the defensive city wall of ancient Aswan.

In areas 1 and 2 Jaritz surveyed what is left of the ancient and medieval wall surrounding Syene, which is well known from the map of the Napoleon expedition[74]. Its several phases are far from being understood, but on the basis of the survey of the known monuments and taking the evidence from area 7 into account some consideration offers new insights.

The projection onto the modern town plan of the early 19th century map published in the *Description* faces some difficulties. Mistakes in proportion and scale are not surprising in the French survey map of the early 19th century. Consequently the course of the town wall in the map published here (Fig. 1) does not mirror the situation the French expedition faced[75]. Topographical landmarks shown in the French map are important for the following argument, in so far as they can still be discerned within modern Aswan.

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[73] U. Monneret de Villard, *Description générale du monastère de Snt. Siméon à Aswan. Ouvrage hors commerce publié sous les auspices du comité de conservation des monuments de l'art arabe*, Mailand 1927, fig. 83.

[74] Jaritz/Rodziewicz, *Urban Remains* I, pp. 116ff., Jaritz/Rodziewicz, *Urban Remains* II, pp. 236f.

[75] The digitized outline of the town wall mapped in the *Description* has only been changed in scale and orientation and has not undergone any other digital manipulations.

The southern semi-circular flight of the town wall ends in a distinctive edge just west of an area marked with palm trees and most probably identical with the area known today as *Birket Damas*. Behind that edge the wall runs further north with a slight angle marked with a rectangular tower and then disappears in between a rock outcrop and a mound, the latter being most probably a *kôm* inside the then abandoned settlement of Syene. Today this hill is crowned by the church of St. Maria, just north-west of the Domitian temple, which is also plotted in the same position in the French map. Moreover, just north-east of area 7, opposite the crossing of Sh. Kasr el-Hagar and Sh. el-Sadat the projecting rock can still be determined. Therefore, the town wall mapped by the French expedition seems to have run to a point closer to the Nile than our unmanipulated projection suggests (Fig. 1); not pointing to the outcrop but some forty metres west of it. Thus, the structure in area 7 fits into that picture and might well be the larger tower at the bend of the two projections of the northward-running town wall (Fig. 8). Whether there was a gate incorporated in that tower, as is the case at Anba Hadra monastery, has to remain open. Finally, the dating of the walls fits well into the picture suggested by historical sources, reporting about extensive building activities regarding the city's fortification in the 6th century AD[76].

K.-C.B.

VII. Survey of Late-Roman Public Buildings at the 'Benzina' (area 9)

At the end of the second season a former petrol station built in 1964 south of Sh. Kasr el-Hagar around 150 m off the modern river bank was dismantled and the area was prepared for the erection of a new building-complex (Fig. 1). After the tanks had been removed heavy machines opened the construction pit in two stages, first in the south-eastern quarter of the site and thereafter in the rest of the area, finally covering around 400 m² (Taf. 19b)[77]. In the light of the short time available and the already existing deep disturbances of the old tank-pits, work concentrated on the architectural and stratigraphical survey along the trench edges complemented by limited excavations (Fig. 10).

The uncovered structures belong to large scale building activities that took place in late Roman times (post 4th century AD) to be divided into three main phases. This separation is restricted to the architecture observed along the eastern and northern edge of the pit, where investigations were undertaken in two sectors. The walls along the western side were razed by the construction machines and it was impossible to connect them safely to the proposed general architectural development of the site.

A small sounding in sector a to a level of 90.66 m produced no evidence of settlement activities at this spot predating phase III. A sequence of Nile sediments rather exemplifies the problematic topographical situation of the area: being situated close to the river it is supposed to have been regularly covered by the annual Nile flood[78]. Despite these conditions, the late Roman buildings, having a floor level of around 91.80 m, were erected without specific measures for raising the building ground.

The functional interpretation of the buildings cannot be ascertained, as most of the walls were only protruding from the sections by a few centimetres, just enough to observe their direction. The

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[76] JARITZ/RODZIEWICZ, *Urban Remains* I, pp. 120ff. n. 9 referring to H. JARITZ, in: *BdE* 97,2, 1985, n. 17, p. 84ff.

[77] Supervised by C. v. PILGRIM (from March 29th to April 3rd) and the author (April 6th to April 8th). We owe thanks to A. KLAMMT, D. RAUE and B. v. PILGRIM who supported us during the work.

[78] *Cf. supra* n. 62. In fact, the excavations in area 9 yielded evidence for floods up to a level of 93.55 m (*cf. infra*).

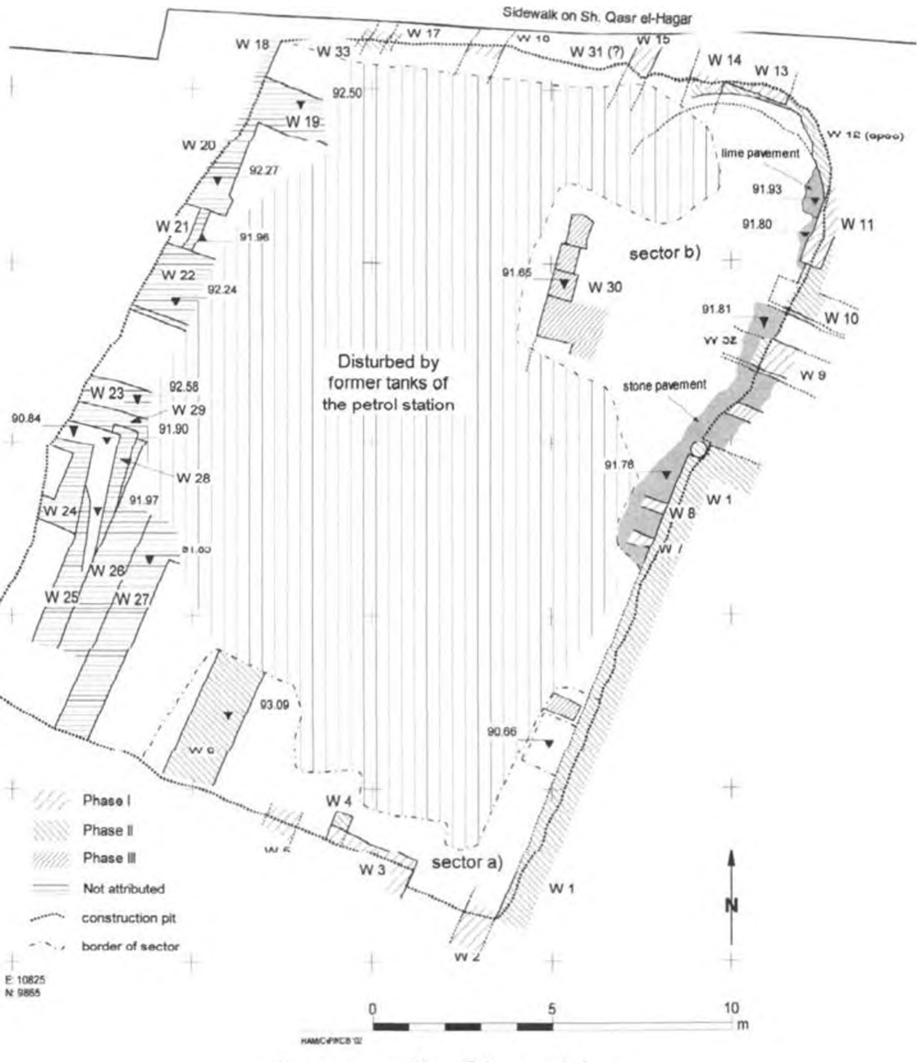

Fig. 10: Area 9. Plan of the recorded structures

only conclusive ground plan, at least of a part of a building, was delineated with a wide apse in the north-eastern corner of the area, belonging to phase II. As it opens to the south, the apse must not necessarily belong to a church, but it provides an idea of the general character of the architecture as belonging to a public building, where the apse was a common feature since early Roman times, later transferred into Christian religious architecture[79].

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[79] On the strict orientation of early Egyptian churches with the main-apse in the east cf. P. GROSSMANN, *Christliche Architektur in Ägypten, HdA* 1.62, Leiden/Boston/Köln 2002, p. 13. On the transfer of the apse into early Christian architecture *cf. loc. cit.*, pp. 20ff.

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After the destruction of the apse, the area was levelled to a height of about 92.50 m. Walls built of fired bricks, coated with lime-plaster were probably erected throughout the whole area. Their dimensions and wide distances also suggest an official building, rather than domestic dwellings. The most prominent feature of this phase I is a pedestal with cornices laid with reused blocks. On top of it a stone with a Roman-style relief was incorporated as a decorative element.

As the foundation of the new building does not reach to the walls at the northern and eastern margins of the pit, only the decorated block was taken out, the other features were left untouched. They are now reburied underneath the filling of the modern foundation pit and are still available for future research.

Sector a (Taf. 19a)

North of the mentioned sounding at the foot of wall 1, a reused block set as a threshold is the earliest architectural feature in sector a (top level 91.52 m). Only small traces of a mudbrick wall nearby can be connected to it, both representing phase III in this sector. They are overbuilt by the best preserved wall of phase II (W 1) that runs along the entire eastern edge of the sector. It is built of carefully laid sandstones, resting on five courses of rubble foundation sporadically made of *spolia* along the eastern section[80]. The blocks of the preserved four courses are almost rectangular in shape, having a flattened surface still showing the strokes of a pointed chisel. Also belonging to phase II at a distance of about 4.7 m west of wall 1, wall 4 is set of reused ashlar-blocks. Resting on a rectangular foundation slab it might belong to a pillar or jamb. As it was completely integrated into later walls of phase I (W 3), this understanding is far from certain. Still further west wall 6, razed down to its foundation during construction work, shows a type of foundation known from wall 1: an undecorated column drum of sandstone (diam. 53 cm) was reused within the rubble foundation. Although the preserved level is about 1 m higher (93.09 m) than that of wall 1, it is believed also to belong to the initial building phase in this sector.

During the later phase I, wall 2 was built along the western face of wall 1 on a level of 92.37 m. Behind a lining of well-cut blocks, the inner part of the foundation was filled with rubble. The connected strata in the section to the west of it show that the upper course of the foundation was visible and that the wall was made of fired bricks. At a distance of 1.75 m is wall 3, built of fired bricks resting on rubble foundation adjacent to a broad flight of two steps. The staircase consists of a sandstone slab, strongly worn out by walking, and a reused granite block, both connected with a thick layer of lime-mortar. In the east the granite step abuts on the framing wall, also having a reused column drum built in the socle. The lower sandstone-staircase is set off to the west. Nevertheless neither reaches to the western wall (W 5), which is only stratigraphically to be attributed to the same phase. Traces of fired bricks along the upper granite step may indicate the manner of the later blocking of the doorway.

Sector b

When the investigations in sector b started, the above described features were already dismantled during the ongoing building activities. The correlation of the building phases is thus established on the proposed continuation of wall 1 along the eastern border of the pit only. The similarities both in technique and direction of the upper wall compartment are nevertheless sufficient to settle the assumption that wall 1 in sector b is at least to be attributed to the same building phase (II), although the foundation of the wall differs in level (91.75 m) and construction (*cf. infra*).

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[80] The bottom level of the foundation is around 91.70 m. The upper wall compartment is set back 4 cm at a level of 92.65 m.

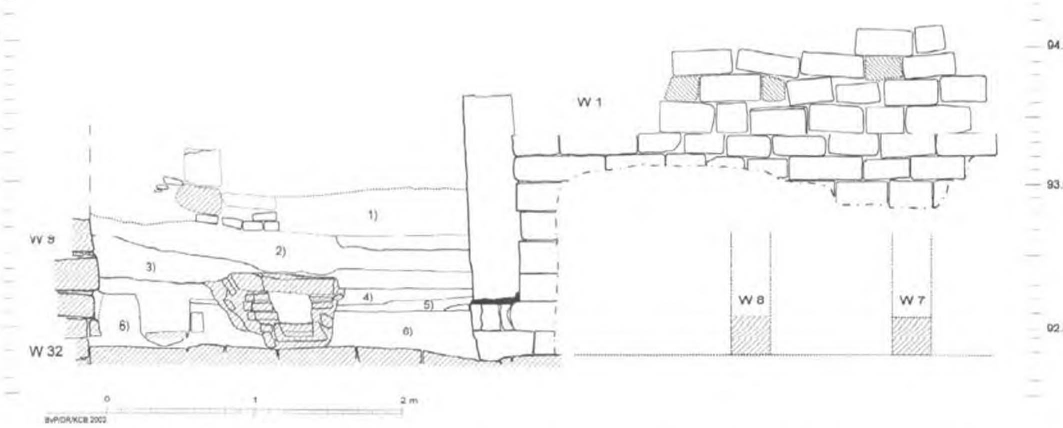

Fig. 11: Area 9. Section at the eastern edge of the pit with elevation of W 1. Description of the layers: 1)–2) Nile-sediment divided by a compact surface with fragments of fired bricks; 3) Dark loamy soil, fragments of fired bricks; 4)–5) Greyish sandy soil divided by a tamped surface; 6) Loamy backfill with fragments of fired bricks

A set of sandstones unearthed about 7 m to the north-eastern corner of the pit possibly predates phase II. The upper face of four reused sandstone blocks was uncovered at the bottom of the pit (W 30), differing considerably in orientation from the later structures. Two of the reused blocks, measuring 54 x 75 cm and 67 x 75 cm respectively, are nicely finished and show holes for dovetail cramps (Taf. 19b)[81].

Sector b yielded evidence for phase II to be divided into two sub-phases, the northern structures contemporary with the apse representing an earlier subphase, later altered by means of wall 1. This wall preserved 2.35 m high is laid in horizontal layers made of sandstones, cut and treated as described for wall 1 in sector a (Fig. 11)[82]. Due to occasionally gaping joints, filled with clay-mortar, the height of each course is uniformly around 16-18 cm (Taf. 19d). The wall ends in a corner leading east, where a small column is integrated into the wall, set on top of the second course.

Further north, the earlier stage of phase II is represented by the apse (W 12) mentioned above and two contemporary walls south of it (W 10, W 32) leading into the trench from the east. The apse with a reconstructed diameter of around 5.75 m joined wall 10 with a straight continuation of the hemispheric wall, giving the apse a depth of 4.2 m. Four courses of the apse wall survived, entirely resembling the masonry of wall 1, even in the dimensions of the stones. Two subsequent floor levels of a lime pavement were met in the apse at 91.93 m and 91.80 m respectively during the excavation. South of wall 10 a narrow passage (0.9 m) is delimited by the position of wall 32. Only three layers of the wall survived, as it was replaced by wall 9 during phase I.

An uneven sandstone pavement, abutting on wall 32 and covering an area reaching south at least 6 m, indicates the subdivision of phase II already mentioned. The uncovered corner of wall 1 is set on top of this pavement, suggesting a former open court later built over by a large structure represented by wall 1.

[81] A preliminary study of the pottery associated with it provides a post 5th century AD date for the stone-setting.

[82] The heights of the single blocks are restricted to a range of 14–20 cm.

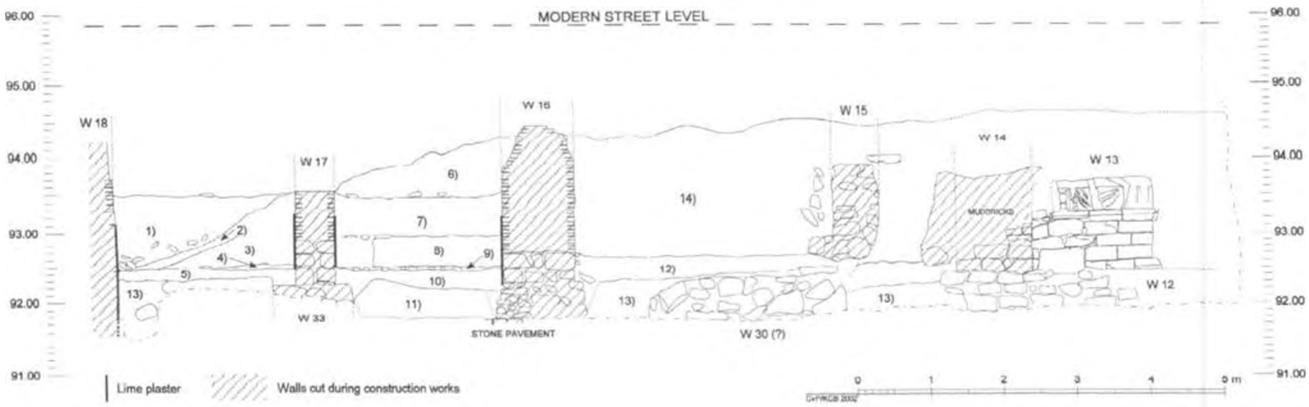

Fig. 12: Area 9. Sketch of the section at the northern margin of the pit. Description of the layers: 1) Filling of loamy dump with fragments of fired bricks; 2) Nile sediment; 3) Several layers of Nile sediments abutting against W 17 in wavy lines; 4) Packed layer of fragmented fired bricks and pieces of lime-plaster; 5) Layer of dump levelling the floor level after construction of W 17; 6) Inhomogeneous construction dump; 7) Lime-pavement bedded on fragmented fired bricks; 8) Nile sediments, including wavy sand strata; 9) Lime-pavement bedded on fragmented fired bricks; 10) Red-brown filling, probably burnt mudbrick material; 11) Inhomogeneous stratum of dump; 12) Very homogeneous sand. No inner structure, probably blown-in material; 13) Dark-greyish loam, with charcoal, probably ash and fragments of fired bricks; 14) Loamy dump with abundant fired brick fragments

West of the apse, walls contemporary with it are only available in the northern section of the pit (Fig. 12). A cluster of tumbled sandstone rubble underneath wall 15 may originally have belonged to a wall flanking the apse at its western side (W 31). Another wall further west may have been completely destroyed, its building material being reused for the erection of wall 16 in phase I. Near the north-western corner of the pit a wall (W 33) at least 1.1 m thick shows the continuation of large building structures heading further towards the Nile.

The earlier structures of phase II in the north of the area were destroyed and buried with a dark layer containing charcoal and ash up to a level of 92.50 m. In the west a new building was erected (W 16–18). The dimensions of the walls, built of fired brick on a strong rubble foundation, again suggest an official purpose for the edifice. Its inner walls are coated with a thick lime plaster, the western room filled with wavy Nile-sediments abutting against wall 17 up to a level of 93.55 m.

A large open area follows to the east, with only wall 15 later being erected in it. It ends at a mudbrick wall (W 14) that is connected to a pedestal 1.3 m high (Taf. 19c). Built of sandstone, it stretches 1.75 m east. Its base and top is furnished with a cornice made of reused blocks. It is crowned by a block showing a decorative relief, representing a part of a *kline* covered by thick cloth. The original context of the block is hard to establish, as comparable presentations are only known from terracotta and jewellery, suggesting the relief to be related to the cult of Serapis[83].

The use of the building represented by wall 1 seems to have continued throughout phase I (Fig. 11). The section north of it shows thin strata of tamped dump-horizons in between larger fillings, frequently divided by layers of Nile-sediments up to a level of 92.75 m. Contemporary with the erection of wall 9, a channel was dug into a dump layer covering the pavement. Later it was changed being shifted to the centre of the street (Taf. 19d).

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[83] On a comparable relief presentation of cloth hanging over a *kline cf.* R.N. Thönges-Stringaris, in: *MDAIA* 80, 1965, pp. 1–99, Beil. 29.2 no. 15a (1st century BC). The material on Serapis resting on a *kline* is collected in T. Kraus, in: *JDAI* 94, 1979, pp. 566–577, esp. fig. 3. A detailed study of the block is in preparation for the next report.

The structures along the western margin of the pit could not be connected to the phases described above. They resemble technical features of phases I and II. Heavy walls built of reused sandstone blocks as well as deep rubble-founded walls of fired bricks were uncovered. Especially in the south western corner the abundant use of lime-mortar within the rubble walls adds to these observations. A small chamber (W 24) entirely coated with lime, most likely a basin, borders a well-executed channel east of it. Both structures were obviously built for the treatment of liquids.

K.-C.B.

Graffiti of Nubkheperre Intef in Deir el-Bahari

By SLAWOMIR RZEPKA

(Tafeln 20–21)

1. Introduction

Since 1999 the Polish-Egyptian Cliff Mission[1] has been working in Deir el-Bahari, above the temple of queen Hatshepsut. One of the main tasks of the mission was to document rock-graffiti in this area, which – quite surprisingly – was so far omitted by all graffiti surveys in the Western Thebes. Our mission has found a considerable number of new, never published graffiti: hieroglyphic, hieratic, demotic, Greek and Coptic inscriptions, as well as figural drawings dating to various periods[2] (among them were such unique examples as the only Old Kingdom rock-inscriptions known so far in Thebes[3]). For a better understanding of this material we have asked the Egyptian authorities for permission to make an additional graffiti-survey in other parts of Western Thebes (which was obligingly granted). We wanted to observe the context (topographical and archaeological), in which the graffiti occur – their relation to ancient tombs, paths, boulders etc – and to compare it with the situation on our site.

Actually, we did not expect to find any new, unpublished graffiti, as we were visiting areas surveyed several times before, by W. SPIEGELBERG and by J. ČERNÝ and his collaborators[4]. But we did find some new graffiti, among them the two, which are the subject of the present article and which can – in my opinion – be of some importance for the reconstruction of the history of the 17th Dynasty.

2. Graffiti

2.1 Position of the Graffiti

The two graffiti were found in Deir el-Bahari, in a wadi called *Vallée de la Cachette Royale* (see Fig. 1). They are placed just next to the mouth of the shaft of the tomb DB 320, i.e. the 'royal cache', in which 1881 mummies of some of the most famous New Kingdom pharaohs were discovered. In a

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[1] This is a joint mission of Warsaw University and the University of Ain Shams, directed by Prof. Dr. ANDRZEJ NIWIŃSKI and Prof. Dr. SHAFIA BEDIER.

[2] Preliminary reports: S. RZEPKA, in: *Polish Archaeology in the Mediterranean* XI, Warsaw 2000, pp. 183–190; ID., in: *Polish Archaeology in the Mediterranean* XII, Warsaw 2001, pp. 229–234.

[3] S. RZEPKA, in: N. KLOTH/K. MARTIN/E. PARDEY (eds.), *Es werde niedergelegt als Schriftstück: Festschrift für Hartwig Altenmüller, SAK Beiheft* 9, Hamburg 2003, pp. 379–385, Tf. 40–43.

[4] Results of those surveys are published in: W. SPIEGELBERG, *Aegyptische und andere graffiti (Inschriften und Zeichnungen) aus der thebanischen Necropolis*, Heidelberg 1921; J. ČERNÝ, *Graffiti hieroglyphiques et hiératiques de la nécropole thébaine. Nos 1060 à 1405*, Cairo 1956; *Graffiti de la montagne thébaine*, Cairo 1969–1983.

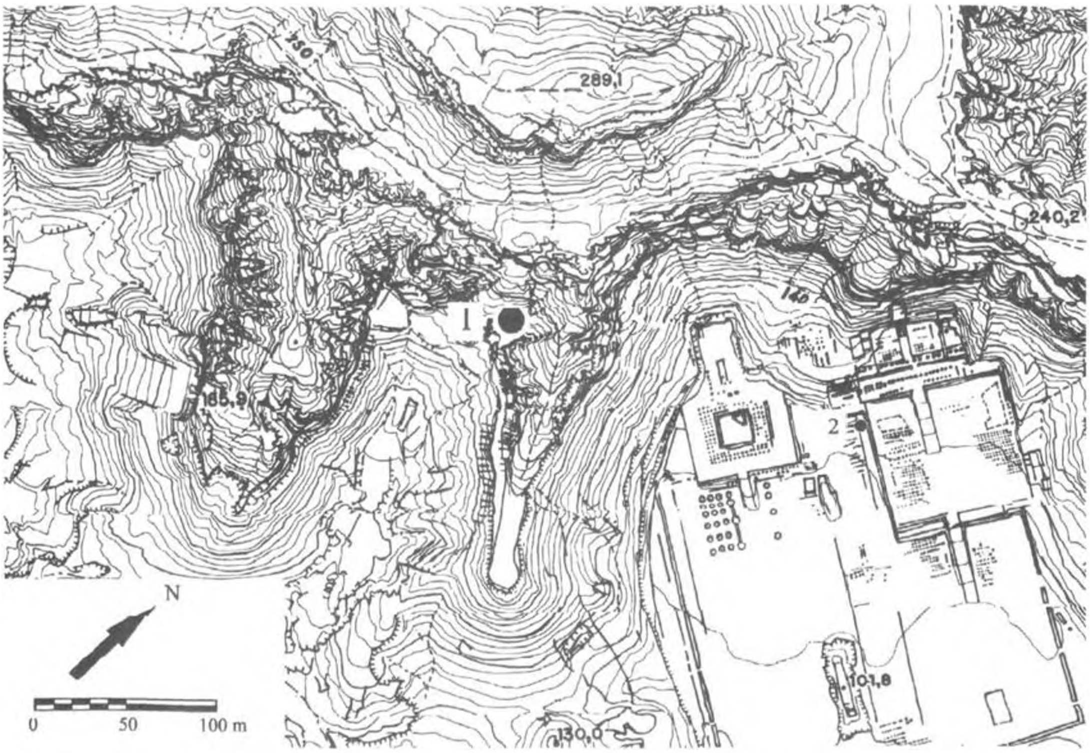

Fig. 1: Map of Deir el-Bahari with position of Nubkheperre Intef's graffiti: [1] newly discovered two graffiti near to DB 320; [2] two graffiti on the northern face of the northern enclosure wall of Mentuhotep's temple (based on J. Černý/Ch. Desroches Noblecourt/M. Kurz, *Graffiti de la Montagne Thébaine, I, [1] Cartographie et étude topographique illustrée*, Le Caire 1969–70, pl. II)

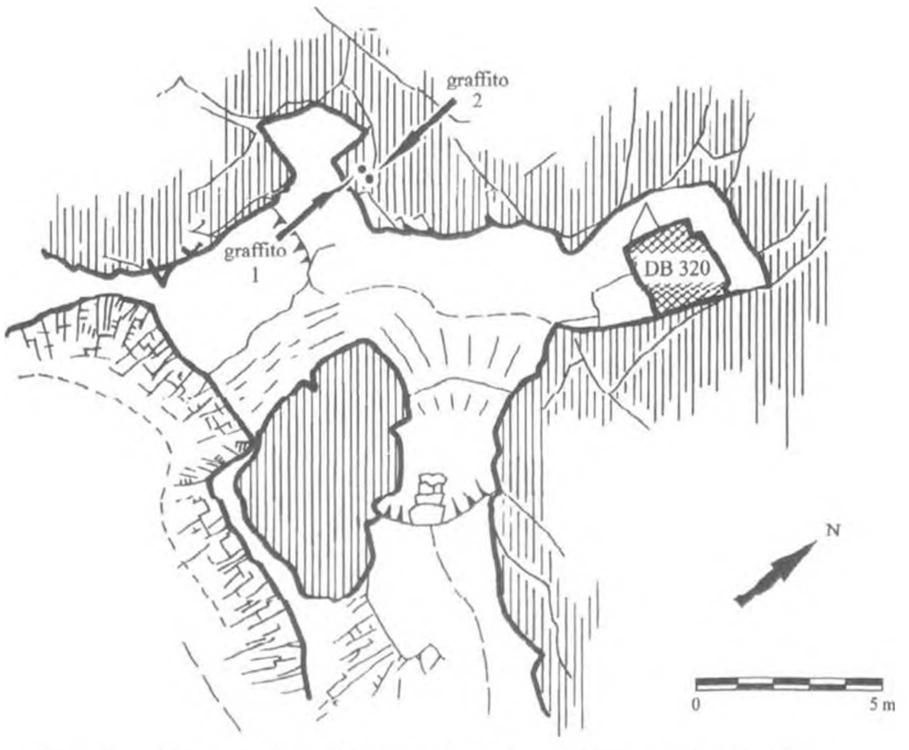

Fig. 2: Plan of the surroundings of DB 320 with position of Nubkheperre Intef's graffiti (based on J. Félix/M. Kurz, *Graffiti de la Montagne Thébaine, II, [1] Plans de position*, Le Caire 1970, pl. 82)

straight line, the distance between the graffiti and the mouth of the shaft is about 8 meters (see Fig. 2). The graffiti are quite high (ca 6.5 m) above the present walking level and are now hardly accessible. To reach them one must climb several meters on an almost vertical rock wall (see Taf. 20). It is obvious that at the moment, in which the graffiti were inscribed, the topography of this area was much different from the present state. This radical change of topography must have taken place still in antiquity, as ca 6 m below the two graffiti in question (i.e. ca 0,5 m above the present ground level) there are graffiti 1311a and 1311b, listing the names of Djehutimes, his son Butehamun and his grandsons[5], who lived in the 21st Dynasty. It is quite sure that this topographical change was a result of works on the tomb DB 320.

2.2 Description of the Graffiti

2.2.1 Graffito 1 (Fig. 3, Taf. 21)

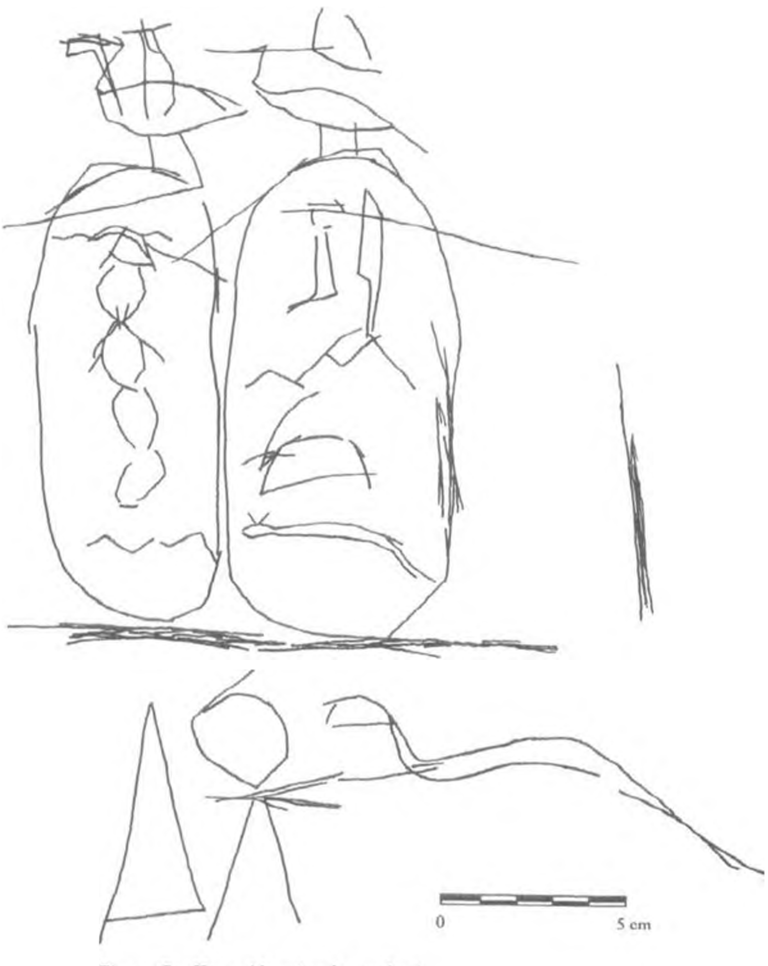

Fig. 3: Graffito 1 (drawing by author)

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[5] Černý, *op. cit.*, p. 20, pl. 59.

Two columns and one horizontal line of inscription, reading:
(1) *nṯr nfr*[a] *Nbw-ḫpr-n-rʿ*[b] (2) *sꜣ rʿ Jnj-jt.f*[c] (3) *dj ʿnḫ ḏt*
Good god Nubkheperenre, Son of Re Intef, given life eternally

Comments

[a] At the place of *nṯr nfr* first the epithet *sꜣ rʿ* was started to be inscribed (only the *sꜣ*-bird was drawn), but then the author of the graffito realised his mistake and replaced *sꜣ rʿ* by *nṯr nfr*. The first epithet never occurs in front of throne names, while the second one is quite common in this position[6].

[b] Order of the signs in this throne name is quite unusual. Normally in such names a honorific transposition was used, i.e. the element *rʿ* was written at the beginning of the name. Exceptions from this rule are quite rare, they occur e.g. in the throne name of *Mnṯw-ḥtp Nb-ḥꜣpt-rʿ* (11th Dyn.)[7] and of *Ḥnḏr Wsr-kꜣ-rʿ* (13th Dyn.)[8].

A variant of this throne name with genitive *n* is attested for the first time. In all the other cases the simple form *Nbw-ḫpr-rʿ* was used[9]. Variants with genitive *n* are known, however, in this type of names[10]. Thus, following VON BECKERATH, the name should be translated "Golden is the form of Re"[11].

[c] A very specific orthography of the nomen, with the *j*-reed following the *jn*-sign is attested exclusively for the Nubkheperre Intef[12]. Thus, in spite of very unusual orthography of the throne name, we can be absolutely sure that the ruler, whose names occur in this graffito, is Nubkheperre Intef of the 17th Dynasty.

2.2.2 Graffito 2 (Fig. 4)

Single horizontal line of inscription, followed by a human standing figure with a praising gesture (?), quite clumsily executed. The inscription reads:
Jnj-jt.f
Intef

Comments

The reed sign *j*, characteristic of the orthography of the nomen of Nubkheperre Intef is not clear here, although vertical lines following *jn* may have belonged to it. A relatively broad space between *jn* and *t+f* also suggests that the *j*-sign was written there. As both graffiti are inscribed very close to each other and the first one surely belongs to Nubkheperre Intef, most probably also this inscription contains the name of the same king. However, as no throne name is included and the *j*-sign in the nomen is not clear, it cannot be excluded that another king Intef is meant here[13].

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[6] J. VON BECKERATH, *Handbuch der ägyptischen Königsnamen, MÄS* 49, Mainz 1999, p. 30 (hereafter cited as BECKERATH, *Handbuch*).

[7] BECKERATH, *Handbuch*, pp. 78–79 [5, T+E].

[8] BECKERATH, *Handbuch*, pp. 94–95 [17, T2].

[9] *Cf.* BECKERATH, *2. Zwischenzeit*, pp. 280–283.

[10] BECKERATH, *Handbuch*, p. 22.

[11] BECKERATH, *Handbuch*, p. 23. Contrary to the translation of T. SCHNEIDER, „Mit goldener Gestalt, ein Re" (*Lexikon der Pharaonen*, Zürich 1994, p. 76). Possibly, the way of translation used by T. SCHNEIDER for the throne name of Thuthmosis II *ʿꜣ-ḫpr-n-rʿ* (*ibid.*, p. 291) can be used here: „Mit goldener Gestalt, der zu Re gehört".

[12] *Cf.* BECKERATH, *2. Zwischenzeit*, pp. 280–283; K.S.B. RYHOLT, *The Political Situation in Egypt during the Second Intermediate Period c. 1800–1550 B.C.*, Copenhagen 1997, p. 267.

[13] One could speculate that in the second graffito *Jnj-jt.f Sḫm-rʿ-hr-ḥr-mꜣʿt* is meant, who should have been a coregent of *Nbw-ḫpr-rʿ Jnj-jt.f* (*ibid.*, pp. 267–268). More probably, however, both graffiti contain the names of the latter king.

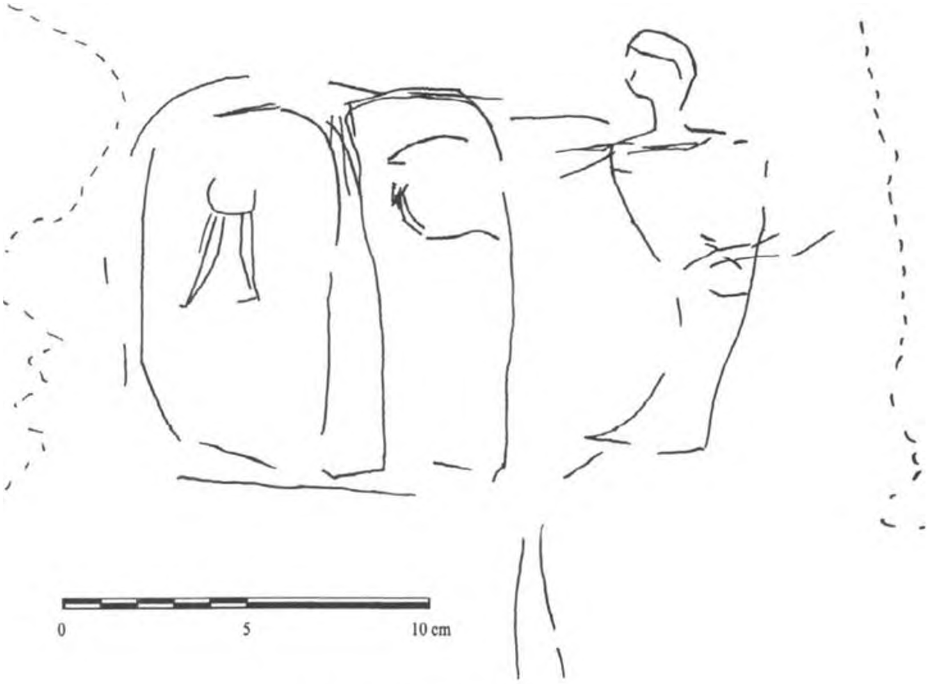

Fig. 4: Graffito 2 (drawing by author)

The inscription written in a horizontal line crosses two vertical ovals – cartouche rings. Apparently, the author of the graffiti first planned an inscription similar to the graffito 1, i.e. two vertical cartouches with the throne name and the nomen of the king, but then changed his mind and wrote only the nomen in a horizontal line, followed by a human figure.

3. Nubkheperre Intef

The two graffiti are interesting and important due to quite original orthography of Nubkheperre Intef's throne name (graffito 1), on the one hand, and due to the context in which they occur, on the other hand. They must be linked with the tomb DB 320, the 'royal cache', next to which they are scratched. Thus, they shed a new light on the problem of the dating of DB 320 and the identity of this tomb's original owner. A short review of the chronological position of Nubkheperre Intef within the 17th Dynasty and traces of his activities in Deir el-Bahari area should be helpful in understanding the meaning of the two graffiti.

3.1 Dating of Nubkheperre Intef

According to VON BECKERATH, Nubkheperre Intef was the first king of the 17th Dynasty[14]. However, there is very strong evidence proving that this king belongs to the second half of this dynasty. This is suggested by the sequence of tombs listed in papyrus Abbot[15], by typologies of coffins and canopic chests of 17th Dynasty kings[16], also by the fact that a certain Minemhat, who was a mayor of Coptos during the reign of Nubkheperre Intef, was still in his office in the reign of Seqenenre Taa[17]. This and other evidence[18] proves that the chronological distance between Nubkheperre Intef and the last kings of Dyn. 17 (Senakhtenre, Seqenenre and Kamose) was very small.

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[14] BECKERATH, *Handbuch*, pp. 124–125 [1].

3.2 Traces of Nubkheperre Intef's Activities in Deir el-Bahari Area

Nubkheperre Intef has left a relatively large number of monuments on various sites[19]. He has left some traces also in Deir el-Bahari, in the temple of Mentuhotep Nebhepetre, i.e. not far away from the place were the two graffiti presented above were found. In the sanctuary of this temple a wooden panel, apparently a base of a shrine, was found, inscribed with the names of Nubkheperre Intef[20]. Furthermore, two graffiti of Nubkheperre Intef are inscribed on the northern face of the northern enclosure wall of Mentuhotep's temple (see Fig. 1 for their position and Fig. 5). The graffiti are placed in a close vicinity of the entrance of a tomb, which H.E. Winlock, on the basis of those graffiti, identified as a tomb of the eldest son of Mentuhotep Nebhepetre, "prince Inyotef"[21]. Winlock was wrong – the specific orthography (with *j* following *jn*) leaves no doubt that we deal with the name of Nubkheperre Intef. D. Arnold even supposed that the tomb belonged to this king[22], which is of course false, as the tomb of Nubkheperre Intef was found already in 1827 in Dra Abu el-Naga and was recently relocated and re-excavated by the German mission directed by D. Polz[23]. Thus, the tomb in Deir el-Bahari probably belongs to some member of Nubkheperre Intef's family.

4. Tomb DB 320 and its Original Owner

4.1 Ownership of DB 320 in the Light of Textual and Archaeological Sources

The question of the original ownership of tomb DB 320, used during the 21st Dynasty as a 'royal cache', is not easy to answer[24]. Dockets on coffins of Ramses I, Seti I and Ramses II state that the royal mummies, during the reign of Siamun, were taken from the tomb of Seti I to the "high tomb" (?) of

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[15] H.E. Winlock, in: *JEA* 10, 1924, pp. 217–277.

[16] A. Dodson, in: *GM* 120, 1991, pp. 33–38. Dodson states: „Given the similarity between the coffins of Nubkheperre and Taa II, the temporal gap between them is unlikely to be large" (*op. cit.*, p. 38, n. 34).

[17] W. Helck, in: *SAK* 13, 1986, p. 126.

[18] Summed up in K.S.B. Ryholt, *op. cit.*, pp. 168–171.

[19] *Ibid.*, pp. 394–395 [File 17/4]. *Cf.* also Ch. Eder, *Die Barkenkapelle des Königs Sobekhotep III. in Elkab, Elkab* VII, Turnhout 2002, pp. 57–77.

[20] M. Kamal, in: *ASAE* 38, 1938, pp. 19–20, pl. IV.

[21] H.E. Winlock, *The Rise and Fall of the Middle Kingdom in Thebes*, New York 1947, pp. 64–65, pl. 38A.

[22] *LÄ* I, col. 1008.

[23] Brief reports from these excavations were published by D. Polz, in: *Antike Welt*, Heft 3, 2002, pp. 289–295; id., in: *Egyptian Archaeology* 22, 2003, pp. 12–15. Recently an extensive preliminary report was published (D. Polz/A. Seiler, *Die Pyramidenanlage des Königs Nub-Cheper-Re Intef in Dra' Abu el-Naga: ein Vorbericht, SDAIK* 24, Mainz 2003).

[24] A summary of the whole discussion on this question is given by K. Jansen-Winkeln, in: R.J. Demarée/A. Egberts (eds.), *Deir el-Medina in the Third Millennium AD. A Tribute to Jac.J. Janssen, Egyptologische Uitgaven* 14, Leiden 2000, pp. 165–169.

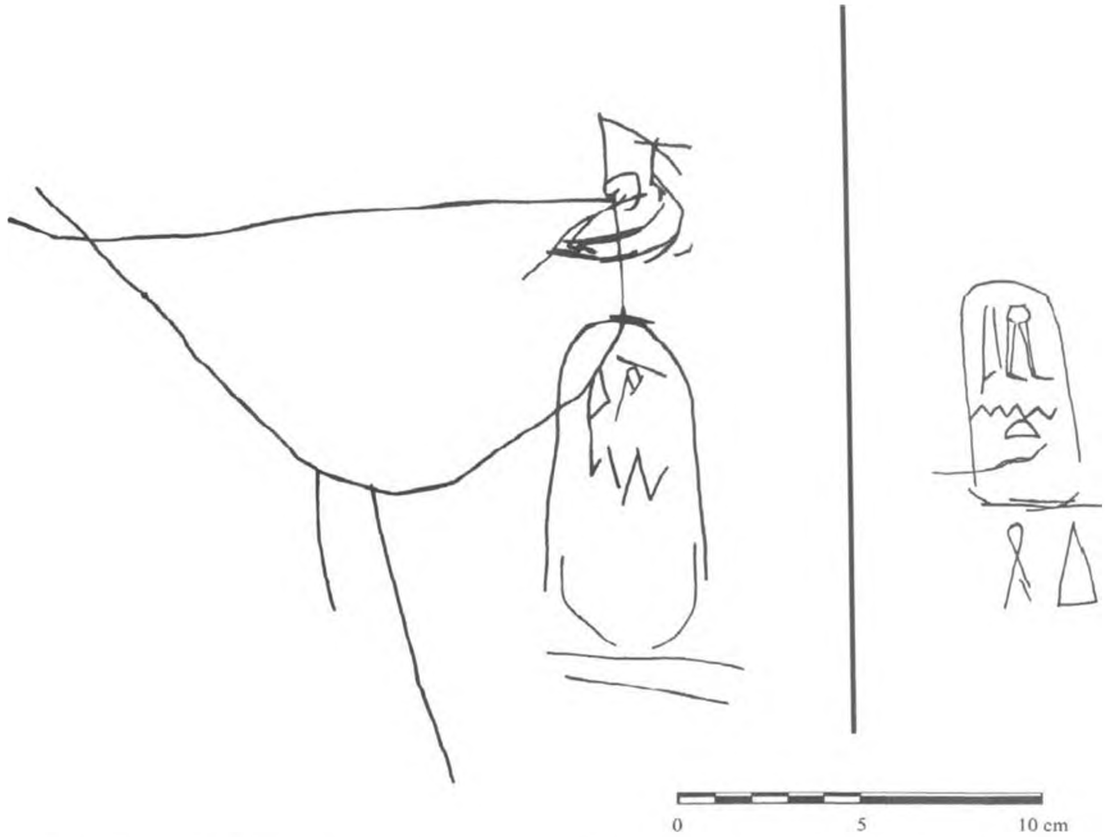

Fig. 5: Graffiti of Nubkheperre Intef on the northern face of the northern enclosure wall of Mentuhotep's temple (drawing by author)

queen Inhapi. In DB 320 the mummy of Inhapi was found – so everything seemed to be simple: DB 320 belonged originally to this queen and was later used as a 'royal cache'. This opinion was represented by H.E. WINLOCK[25] and by E. THOMAS[26]. The archaeological context, however, seemed to testify against this identification: no funerary equipment of Inhapi was found in the tomb, she was even buried not in her own sarcophagus. Furthermore, the mummy of Inhapi and the royal mummies were placed near to the tomb entrance, while the burials of 22nd Dynasty priests were found deep inside the tomb. On the basis of those observations M. DEWACHTER[27] and N. REEVES[28] excluded Inhapi as the original owner of DB 320. Also the new excavations in DB 320, during which for the first time a precise plan of the tomb was made, seemed to bring evidence against ascribing the tomb to Inhapi (or rather against the way in which E. THOMAS ascribed the tomb to this queen)[29]. Recently K. JANSEN-

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[25] In: *JEA* 17, 1931, pp. 107–10.

[26] In: *JARCE* 16, 1979, pp. 85–92.

[27] In: *BSFE* 74, 1975, pp. 19–32.

[28] *Valley of the Kings. The Decline of a Royal Necropolis*, London 1990, pp. 183–192.

[29] E. GRAEFE, in: *MDAIK* 56, 2000, pp. 215–221.

Winkeln managed – quite convincingly – to combine both categories of sources: texts on dockets and archaeological context, and created a coherent picture of the history of DB 320. According to him, this tomb did originally belong to queen Inhapi. I will not refer to his arguments here. I would like only to answer the following questions:

– do the two graffiti presented above support the identification of Inhapi as the owner of DB 320 or rather contradict it?

– if we accept that Inhapi was the owner of DB 320, what can the two graffiti say about the familial connections within the 17th Dynasty?

4.2 The Problem of DB 320's Ownership in the Light of Two Graffiti of Nubkheperre Intef

The mummy of Inhapi is in its technique of mummification very similar to the mummy of Seqenenre Taa and should have been prepared earlier than the mummy of king Ahmose[30]. Thus, Inhapi must have lived during the late 17th Dynasty, eventually also at the very beginning of the 18th Dynasty. Two graffiti of Nubkheperre Intef found next to DB 320 are of similar date – they belong to the second half of the 17th Dynasty. Thus, they support the identification of Inhapi as the owner of DB 320.

5. Relation between Nubkheperre Intef and Queen Inhapi

If we accept the identification of Inhapi as the owner of DB 320, we must try to answer the question: what was her relation to Nubkheperre Intef? The graffiti of Intef found in the closest vicinity of DB 320 suggest that the tomb was prepared (or at least was started to be prepared) during the reign of this king, possibly for a member of the king's family.

5.1 Family of Inhapi

Our information about the familial relations of queen Inhapi is scarce[31]. We know that she was 'king's wife' (*ḥmt nsw*) and 'king's daughter' (*s3t nsw*). M. Gitton presumes that she was also 'king's sister' (*snt nsw*), but we do not have direct evidence for that[32]. She was mother of princess *Jꜥḥms Ḥnwt-t3-mḥw*[33]. In one source *Jnj-ḥꜥpj* occurs as *Jꜥḥms Jnj-ḥꜥpj*[34]. The element *Jꜥḥms* belongs to names of all children of Seqenenre Taa, but it was not their exclusive attribute (e.g. a daughter of king Ahmose was named Ahmes Meritamon)[35]. On the basis of this sum of evidence (scarce as it is) Inhapi was supposed to be a daughter of king Senakhtenre and a wife of Seqenenre Taa[36] or a daughter of Seqenenre Taa and a wife of king Ahmose[37].

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[30] G. Elliot Smith, *Royal Mummies, CG Nos 61051–61100*, Cairo 1912, pp. 8–9.

[31] All sources mentioning Inhapi are listed in: L. Troy, *Patterns of Queenship*, *Boreas* 14, Uppsala 1986, p. 161 [17.9].

[32] M. Gitton, *Les divines épouses de la 18e dynastie*, Paris 1984, p. 19, n. 49.

[33] T. Stasser, in: *Amosiadès. Mélanges offerts au Professeur Claude Vandersleyen par ses anciens étudiants*, Louvain-la-Neuve 1992, pp. 367–373. In the Book of the Dead of *Jꜥḥms Ḥnwt-t3-mḥw* the name of her mother is given as *T3-nt-ḥꜥpj* – apparently *Jnj-ḥꜥpj* and *T3-nt-ḥꜥpj* is the same person (*cf.* G. Daressy, in: *ASAE* 9, 1908, p. 96; T. Stasser, *op. cit.*, p. 370).

[34] On a stela from the tomb TT 53 (*Urk.* IV, 1217).

[35] T. Stasser, *op. cit.*, p. 372.

5.2 Position of Inhapi within the 17th Dynasty

I would like to propose a new identification of royal father and royal husband of Inhapi, on the basis of the following facts:

1) Two graffiti of Nubkheperre Intef are inscribed next to the tomb DB 320, which most probably was the tomb of Inhapi.

2) A tomb north of the northern enclosure wall of Mentuhotep Nebhepetre's temple, accompanied by graffiti with cartouches of Nubkheperre Intef, may suggest that members of this king's family were buried in Deir el-Bahari.

3) The names *Jnj-jt.f*[38] and *Jnj-ḥꜥpj*[39] show an interesting similarity – both contain the element *jnj*.

4) After Nubkheperre Intef a new line of rulers comes to power, starting with Senakhtenre (followed by Seqenenre Taa, Kamose, Ahmose and Amenhotep I)[40].

5) The name of Inhapi's daughter *Jꜥḥms Ḥnwt-tꜣ-mḥw* contains the element *Jꜥḥms*, which is very common among the members of the new ruling family. In one source also Inhapi is named *Jꜥḥms Jnj-ḥꜥpj*.

6) The throne names of Kamose (*Wꜣḏ-ḫpr-rꜥ*) and Intef (*Nbw-ḫpr-rꜥ*) are obviously similar[41], which may mean that Kamose wanted to underline his ties with Nubkheperre Intef.

7) A stela from Edfu depicts Sobekemsaf, the senior queen of Nubkheperre Intef with her arm around Ahhotep, the senior queen of Seqenenre and mother of king Ahmose[42]. This monument proves that ties between two royal families of the 17th Dynasty, the family of Nubkheperre Intef and the new line of rulers, were very close. It is quite obvious that those ties must have been results of royal marriages.

After having considered all the above facts, I would like to propose the following reconstruction of the family tree of Dynasty 17:

Inhapi was a daughter of Nubkheperre Intef. Still during her father's reign, she started to prepare a tomb for herself – DB 320. She was married to one of the men from the new ruling family, who wanted by this marriage to legitimise his power. It may have been Senakhtenre, the first king of this new line, who probably needed this kind of legitimisation. Another candidate could be Kamose, who may have consequently underlined his ties with the earlier ruling family by marriage with the daughter of Nubkheperre Intef and by choosing a throne name similar to the throne name of his father-in-law. It is not certain which king was Inhapi's husband (Seqenenre and Ahmose cannot be excluded either), the fact is, however, that Inhapi seems to be a link between two ruling families of the 17th Dynasty: as a daughter of Nubkheperre Intef and a wife of one of his successors.

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[36] L. TROY, *op. cit.*; T. STASSER, *op. cit.*, p. 373, tableau 1; A. GRIMM/S. SCHOSKE, *Im Zeichen des Mondes. Ägypten zu Beginn des Neuen Reiches*, München 1999, p. 44.

[37] T. SCHNEIDER, *op. cit.*, p. 45; T. STASSER, *op. cit.*, p. 373, tableau 2.

[38] RANKE, *PN* I, p. 34 [1, 5]; *PN* II, pp. 23, 341.

[39] RANKE, *PN* I, p. 35 [9]; *PN* II, p. 342.

[40] This new royal family comes from Dendera and shows a special reverence for the god Thot; *cf.* W. HELCK, in: *SAK* 13, 1986, pp. 125–133.

[41] As observed by W.C. HAYES, *Egypt from the Death of Ammenemes II to Seqenenre II. CAH* II 2, Cambridge 1965, p. 31.

[42] K.S.B. RYHOLT, *op. cit.*, p. 289.

6. Conclusions

Two graffiti of Nubkheperre Intef, found near to the 'royal cache' are of special interest because:
- they show a new, unusual variant of king's throne name;
- they date the beginnings of the tomb DB 320 ('royal cache') to the second half of Dynasty 17;
- they suggest a familial relation between Nubkheperre Intef and the queen Inhapi and let us see in the latter a link between two ruling families of the 17th Dynasty.

Abstract

The article presents two graffiti of a 17th Dynasty king, Nubkheperre Intef, found in Deir el-Bahari near to the tomb DB 320 ('royal cache'). They yield some new arguments in a discussion on the date of the 'royal cache' and the identity of its original owner, as well as some new indices for the reconstruction of the history of the 17th Dynasty.

Three Unpublished Naophorous Statues from Cairo Museum

By Hassan Selim

(Tafeln 22–24)

I. The Naophorous Statue JE 37425 from the Cairo Museum (Taf. 22)

Kneeling naophorous statue made of black granite. It measures 25 cm in height and was discovered by G. Legrain in the Karnak Cachette[1]. His face, right shoulder, right flank of the body and the right corner of the base are broken off.

He kneels on a rectangular base with a curved front, sitting back on his heels with his feet perpendicular to the ground. His toes are bent forward and splay out across the top of the plinth. They are separated by deeply incised lines and the toenails are indicated.

The owner of the statue holds an empty naos[2] between the fingertips of his outstretched hands, which rest over his thighs. It is a *k3r*-shrine, which has a rectangular form with vaulted roof; its lintel shows the winged sun-disk.

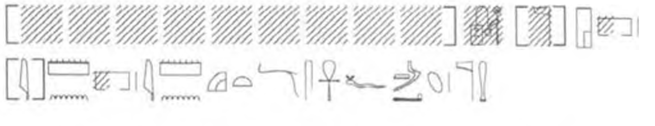
He wears a striated wig in which the single strands of the striations are carved continuously from one side of the head to the other. He wears a pleated *šndyt* kilt with central tap.

The Texts:

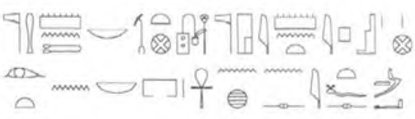
1. The Back-pillar

Two vertical columns of hieroglyphs which are separated by an incised vertical line. The upper part of the first column is destroyed.

1



2



1 [.....] *sš ḥwt[-nṯr] pr [Ỉ]mn pr Ỉmn-Ỉpt Ns-ꜥnḫ.f-m3ꜥt s3 ḥm-nṯr*

2 *ḥm-nṯr Mnṯ(w) nb W3st sš ḥwt-nṯr Ỉmnt (m) Ỉp(t)-swt Ns-p3wty-t3wy irt n nb(t) pr ꜥnḫ-n.s it.s m3ꜥ (-ḫrw)*

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[1] PM II^{2}, p. 158.

[2] There are another two examples of naophorous statues carrying an empty naos: Baltimore W.A.G. 22.81, G. Steindorff, *Catalogue of the Egyptian Sculpture in the Walters Art Gallery*, Baltimore 1946, pp. 62–63, pl. XXV. Cairo JE 44637, G. Daressy, in: *ASAE* 17, 1917, pp. 21–24.

1 "[.....] scribe of the temple of Amun Karnak and temple of Amun Luxor(a) *Ns-ʿnḫ.f-mȝʿt*(b) son of the priest(c)

2 of Monthu lord of Thebes Scribe of the temple of Amunet (in) Karnak *Ns-pȝwty-tȝwy*(d) born of the lady of the house *ʿnḫ-n.s-it.s*(e) justified(f)."

(a) A few traces remain of the signs *šs, pr, mn* whereas the sign *nṯr* in *ḥwt-nṯr* is completely destroyed, as is the sign *ʾI* in *ʾImn*.
pr ʾImn is an indication of Luxor temple while *pr ʾImn ʾIpt* indicates to Karnak temple.

(b) Ranke, *PN* I, p. 174(6).

(c) *ḥm-nṯr* written incorrectly twice: once at the end of the first column and once at the beginning of the second column.

(d) Ranke, *PN* I, p. 176(1).

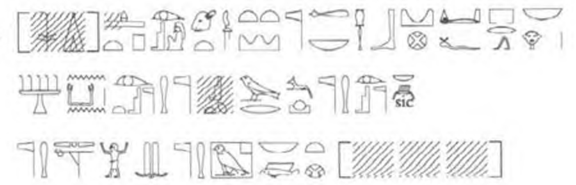
(e) *Loc. cit.*, p. 65(11).

(f) The sign *ḫrw* in *mȝʿ-ḫrw* was not written.

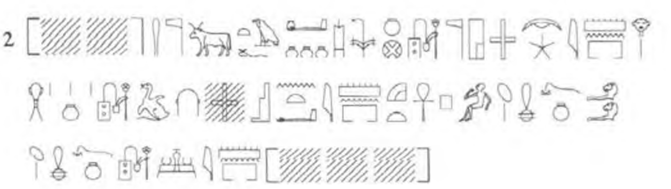
2. The Base

Two horizontal lines of hieroglyphs bordered by incised lines run around the base. The left corner of the base is destroyed.

1



2



1 *ḥtp [di nswt] Wsir ḫnty-imntt nṯr ʿȝ nb ȝbḏw di.f pr nb ḥr ḫȝw(t) n kȝ n Wsir ḥm-nṯr [ȝst] wr(t) mȝȝ sštȝ ȝḫt ḥm-nṯr Wsir nb imȝḫ ḥm-nṯr Mnw ḳȝi šwty ḥm-nṯr ḥt-ḥr nb(t) ʾInt* [.....]

2 [.....] *ḥm-nṯr Kȝ-mwt.f ḥnk(-nww) ʾIwn-šmʿw sš ḥwt-nṯr imy ȝbd pr-ʾImn ḥr sȝ 3-nw sš ṯȝ imy-st-nt-ʿ pr-ʾImn-ʾIpt ʿnḫ-pȝ-ẖrd sȝ mi nw ḥȝt-ḥȝt sȝ mi nw sš wḏḥw pr-ʾImn* [.....]

1 "An offering [which the king gives] (to) Osiris, Foremost of the Westerners, the great god, lord of Abydos, may he give that which comes upon the altar to the Ka of Osiris, priest of the great [Isis(a)], seer of the secrets of the horizon(b), priest of Osiris, lord of honoured(c) priest of Min high plumed, priest of Hathor the lady of the necropolis(d) [.....]

2 [.....] priest of *Kȝ-mwt.f*, *ḥnk(-nww)* priest of Upper Egyptian Heliopolis(e), scribe of the temple in (his) month of the Amun temple from the third phyle, scribe of the cadaster(f), acolyte(g) of Amun Karnak *ʿnḫ-pȝ-ẖrd*(h) son of the like-titled *ḥȝt-ḥȝt*(i), scribe of the offering table of the Amun temple [.....]"

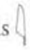
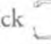
(a) I suggest that in the destroyed place one should restore the sign *ȝst*.

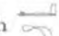
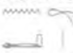
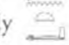
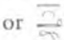
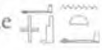
(b) The title *Mꜣꜣ sštꜣ ꜣḫt* is known during the Late Period[3]. There are other variants for the title *mꜣꜣ sštꜣ ꜣḫt*, such as: *mꜣꜣ sštꜣ pt* "seer of secrets of the sky"[4]; *mꜣ štꜣ n Pꜣwty-tꜣwy* "seer of secrets of the primeval god of the two lands"[5]; *mꜣꜣ sštꜣ n ḥmt-nṯr Nt-iḳrt mꜣꜥ-ḫrw m wꜥbt* "seer of secrets of the god's wife Nitokris justified in *wꜥbt*"[6]; *mꜣꜣ sštꜣw n ḏrt-nṯr šp-n-wpt m wꜥbt* "seer of secrets of the divine hand Schepenope in the *wꜥbt*"[7]; *ḥry sštꜣ n wꜥbt* "one who is privy to the secrets of the *wꜥbt*"[8]; *mꜣ(w) bsw m ḥwt-nṯr nt Ỉmn* "seer of secrets in the temple of Amun"[9]; *wn ꜥꜣwi ꜣḫt/pt* "opener of the door of the horizon"[10].

(c) The sign *ꜣw* is written wrongly instead of the sign *imꜣḫ*.

(d) *int* is a valley or wadi which runs between two ranges of hills or mountains. The word *int* can also mean the necropolis area of places such as Dendera, El-Kab, Thebes and Memphis[11].

(e) The meaning of the title *ḥnk(-nww)* is uncertain. *Wb* III, p. 118 translated it "der den Nun schenkt". Probably the *ḥnk(-nww)* was a priest responsible for libation in the sanctuary in the cult at Hermonthis[12]. Jansen-Winkeln proposed that the title *ḥnk(-nww)* was a Theban title and borne by the priests of Hermonthis nome[13].

(f) The title *sš ṯꜣ* was already known in the Middle and New Kingdom[14]. In the Late Period the word *ṯꜣ* in the title *sš ṯꜣ* is written with the duckling sign [15] and usually with the determinative of a hobble for cattle and rarely with the determinative of a pustule ; herb ; two flowering reeds ; finger horizontally leveled and forearm with the hand holding a stick [16].

(g) *imy-st-nt-ꜥ* is a variant for the title *imy-st-ꜥ* which was known from the Old to the New Kingdom. In the Late Period usually the title *imy-st-nt-ꜥ* ending with  expanded into , and finally  or [17]. See the similar writing of the title  on the statue of *Pꜣ-n-mꜣꜥt* which dates to the end of the 25th Dynasty[18].

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[3] Examples for this title see: K. Jansen-Winkeln, *Biographische und religiöse Inschriften der Spätzeit aus dem Ägyptischen Museum Kairo, ÄAT* 45(1–2), 2001, pp. 37(a, b), 38(d, f, h, i, j, k); E. Graefe, *Gottesgemahlin,* in: *ÄA* 37, Vol. II, pp. 59–63; R. El-Sayed, in: *BIFAO* 84, 1984, pp. 131–132(dd); Id., in: *BIFAO* 87, 1987, p. 172(c); J. Assmann, *Das Grab des Basa (Nr. 389) in der thebanischen Nekropole, AV* 6, Mainz 1973, p. 18.

[4] The earliest documentation of this title is in the tomb of *Ỉnti* at Saqqara which dates back to the middle of the 5th Dynasty *cf.* Mariette, *Mastabas*, p. 149. Other examples from the Late Period see: J. Assmann, *op. cit.*, p. 19(note 30).

[5] R. El-Sayed, in: *BIFAO* 87, 1987, p. 172(note c).

[6] S. Donadoni, in: *OrAnt* 12, 1973, p. 42; G. Vittmann, *Priester und Beamte im Theben der Spätzeit,* Wien 1978, p. 134.

[7] L.A. Christophe, in: *ASAE* 53, 1956, p. 58(9); G. Vittmann, *op. cit.*, p. 134.

[8] G. Vittmann, *op. cit.*, p. 135.

[9] W.M.F. Petrie, *Tombs of the Courtiers and Oxyrhynkhos*, London 1925, pl. XII(7); A. Ward, *Index of Egyptian Administrative and Religious Titles of the Middle Kingdom,* Beirut 1982, p. 94(788).

[10] G. Legrain, in: *BIFAO* 13, 1917, pp. 22–23; J. Assmann, *op. cit.*, p. 19. The *ꜣḫt* in this concept indicates the naos in which dwells the statue of the god or is a reference to a special temple at Thebes *cf. loc. cit.*, p. 19.

[11] Gauthier, *DG.* I, p. 86; P. Wilson, *op. cit.*, p. 87.

[12] J.C. Goyon, in: *BIFAO* 65, 1967, pp. 93–94; P. Kaplony, in: *LÄ* VI, 687(n.19); R. El-Sayed, in: *BIFAO* 83, 1983, pp. 138–139(I).

[13] K. Jansen-Winkeln, *op. cit.*, p. 32. For more information on this title *cf.* G. Vittmann, *Priester und Beamte im Theben der Spätzeit,* Wien 1978, p. 188; C. Traunecker, in: *BIFAO* 72, 1972, p. 209(2).

[14] For examples see: H. Selim, in: *MDAIK* 56, 2000, p. 367(D).

[15] *ḏꜣy* shows in the title *sš ḏꜣy* as variant writing of *ṯꜣ*. Examples see: Cairo Museum JE 46059, A. Abdalla, *Graeco-Roman Statues Found in the Sebbakh at Dendera,* in: Chr. Eyre et al. (eds.), *The Unbroken Reed. Studies in the Culture and Heritage of Ancient Egypt in Honour of A.F. Shore*, London 1994, pp. 8–11.

[16] For this title and examples see: Ph. Collombert, in: *RdE* 48, 1997, pp. 20–21(d); K. Jansen-Winkeln, *op. cit.*, p. 17(3).

[17] R.A. Parker (ed.), *A Saite Oracle Papyrus from Thebes in the Brooklyn Museum*, Rhode Island 1962, p. 30. For examples see: M. Weber, *Eine Statuette des Month-Priesters Pen-maa,* in: *Religon und Philosophie im Alten Ägypten, Festgabe für P. Derchain zu seinem 65. Geburtstag am 24. Juli 1991, OLA* 39, 1991, p. 345(d); H. Selim, *op. cit.*, p. 366(b).

[18] Cairo Museum JE 38002, K. Jansen-Winkeln, *op. cit.*, p. 334(Nr. 3.c).

(h) Ranke, *PN* I, p. 63(17).

(i) *Loc. cit.*, p. 233(11); G. Vittmann, in: *GM* 141, 1994, p. 98

Comment

Maybe *ꜥnḫ-pꜣ-ẖrd* is the owner of the statue, which name is inscribed on the base. The name of his father is *ḥꜣt-ḥꜣt*. Further support for this claim is the fact that *ꜥnḫ-pꜣ-ẖrd*'s name is preceded by the *ḥtp di nswt* formula. None the less the name of *Ns-ꜥnḫ.f-mꜣꜥt* is inscribed on the back-pillar. Maybe he is the one who made the statue for *ꜥnḫ-pꜣ-ẖrd* (his father is *Ns-pꜣwty-tꜣwy*, his mother is *ꜥnḫ-n.s-it.s*) but because of the broken state of the inscription at the top of the back-pillar we cannot be certain about the relation between the owner of the statue *ꜥnḫ-pꜣ-ẖrd* and *Ns-ꜥnḫ.f-mꜣꜥt*[19].

The naophorous statue of *ꜥnḫ-pꜣ-ẖrd* dates to the 26th Dynasty probably in the reign of King Psammetich I or Apries. This is supported by the previous dating of this type of naophorous statue and the other artistic features present on the statue.

The type of naophorous statue of *ꜥnḫ-pꜣ-ẖrd* is a kneeling naophorous statue with the naos resting on the thigh. This type was common during the 26th and 27th Dynasties and was rare during the 30th Dynasty[20].

The naos of the statue of *ꜥnḫ-pꜣ-ẖrd* is the *ḳꜣr*-naos, which was common among the naophorous statues during the first half of the 26th Dynasty and was rare from 27th Dynasty to 30th Dynasty[21]. The lintel of the naos shows the winged sun-disk which was common during the reign of King Psammetich I and was rare during the reign of King Ahmose (Amasis), 27th Dynasty to 30th Dynasty[22].

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[19] PM II^2, 1972, p. 158, mentioned that the owner of the statue is *Ns-ꜥnḫ.f-mꜣꜥt*, prophet of Osiris and Min.

[20] Examples from the 26th Dynasty: Cairo JE 37399, B.V. Bothmer, in: *Kêmi* 20, 1970, p. 45(no. XVI), pl. XII, fig. 24. Cairo JE 37055, S. Pernigotti, in: *SCO* 21, 1973, pp. 308–313, pl. II. Baltimore W.A.G. 22.81, G. Steindorff, *op. cit.*, p. 62(no. 179), pl. XXX. Thorvaldsen Mus. 356, E.K. Lilles, in: *SÄK* 6, 1978, pp. 97–100, pl. XXX. Nantes, Musée Dobrée 1255, R. El-Sayed, in: *BdE* 69, 1975, pp. 160–165(Doc. 13), pl. XXX. Berlin 8809, Schaefer, *Kunst*, p. 415(1). Louvre E. 4901, P. Vernus, in: *BdE* 74, 1978, pp. 102–103(no. 107), pl. XVII–XVIII. British Mus. AE. 111, C. Vandersleyen, *Das Alte Ägypten*, *PKG*, 1975, pl. 218. British Mus. 83, K. Piehl, in: *ZÄS* 31, 1893, pp. 88–94, pl. VI. Lyon, Coll. of Varille I, P. Tresson, in: *Kêmi* 4, pp. 126–142, fig. I. Cairo TN. 27/11/58/8, E. Bresciani, in: *SCO* 16, 1967, pp. 273–280, pl. I. British Mus. AE. 29478, F. von Kaenel, *Les prêtres-ouâb de Sekhmet et les conjurateurs de Serket*, Paris 1984, pp. 81–86(no. 40), pl. XII–XIII. Cairo CG. 33309, CG. 33310, G. Edgar, *Sculptors' Studies and Unfinished Works*, Cairo 1906, pp. 3–4, pl. III.

Examples from the end of the 26th Dynasty or beginning of the 27th Dynasty: Toronto, Royal Ontario Mus. 969.137.1, G. Martin, *The Tomb of Hetepka and other reliefs and inscriptions from the sacred animal necropolis North Saqqara 1964–1973*, London 1979, pp. 57–58. Brooklyn Mus. 60.11, Bothmer, *Egyptian Sculpture*, pp. 65–66(no. 56), pl. 51, fig. 123.

Examples from the 27th Dynasty: Cairo CG 724, *loc. cit.*, pp. 78–79(no. 65), pls. 61–62, figs. 154–157. Cleveland Mus. 3955, *loc. cit.*, pp. 72–75(no. 61), pl. 58, figs. 143–145. Cairo JE 37138, *PM* II^2, 1972, p. 156.

Example of the 30th Dynasty: Karnak (CS-349/13/1/75), J. Goyon, *Karnak VII*, 1982, pp. 181–184, pls. I–II.

[21] Examples see: H. Selim, *op. cit.*, p. 368(notes 72–73).

[22] Examples from the 26th Dynasty: Cairo JE 37399, see note 79. Ashmun EL-Romman, H.S. Bakri, in: *Kêmi* 20, 1970, pp. 22–36, pl. IV. Cairo CG 730, H. de Meulenaere (ed.), *Mendes* II, 1976, p. 40(no. 95), pl. 19. Rome, Coll. Marchesi, S. Donadoni, in: *MDAIK* 24, 1969, pp. 100–104, pl. XV. Cairo JE 38016, H. Selim, *op. cit.*, pl. 42(b). Cairo CG 672, R. El-Sayed, in: *BdE* 69, 1975, pp. 73–93(Doc. 6), pl. X. Vatican Mus. 177, P. Romanelli/G. Botti, *Le sculture del Museo Gregoriano Egizio*, Vaticano 1951, pp. 40–41, pl. XXXII.

Example from the end of the 26th Dynasty or beginning of the 27th Dynasty: Berlin 10192, G. Vittmann, in: *ZÄS* 103, 1976, pp. 143–146, pl. XII.

Example from the 27th Dynasty: Cairo JE 37215, PM II^2, p. 157.

Example from the 30th Dynasty: San Francisco, H. De Young Memorial Mus. 54664, Bothmer, *Egyptian Sculpture*, pp. 89–90(No. 72), pl. 68, figs. 174–176.

The owner of the statue wears a striated wig, which was common throughout the 25th Dynasty and the beginning of the 26th Dynasty, especially in the time of King Psammetich I and rarely during the time of King Apries[23].

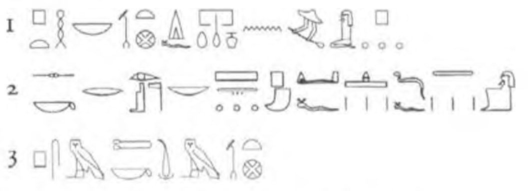
II. The Naophorous Statue JE 37210 from Cairo Museum (Taf. 23)

This is a headless kneeling naophorous statue made of limestone with a height of 27.5 cm. It was discovered in the Karnak Cachette[24]. The figure kneels on a rectangular base against a back-pillar. He sits on his heels with his feet at right angles to the base and his toes splayed out. He wears a short, tightly pleated kilt with a wide waistband. The pleats are depicted with incised lines. The naos is a rectangular vaulted roof *k3r*-shrine with a cavetto cornice and torus moulding resting over his thighs. A naos containing a figure of the god Ptah, who is represented mummiform and holding the *ḏd, w3s* scepter, rests at his feet. The head and both arms from the elbow to the hands have been broken off.

The Text:

1. The Naos

One vertical column of inscriptions on each side of the naos and one horizontal line on the lower lintel of the naos.



1 *Ptḥ nb W3st di.f pr-ẖrw t ḥnḳt n ẖnty pn*
2 *Skr-Wsir nb šṯyt di.f ḥtpw ḏf3w <n> ḥsi*
3 *Psmṯk-mn-m-W3st*

1 "Ptah lord of Thebes may he give an invocation offering of bread and beer to this statue(a)
2 Soker-Osiris lord of the *šṯyt*(b) may he give an offering and provision (to) the statue(c)
3 *Psmṯk-mn-m-W3st*(d)."

(a) Etymologically this may be related to *ẖni* "to sail" and originally *ẖnty* may have been the visible cult statue of the god, which was taken in processions[25]. In this text the word *ẖnty* is written with the determinative of a kneeling statue.

(b) *šṯyt* denotes the sanctuary of a god, especially Soker and can be also used to mean tomb so it is sepulchral in implication. Originally *šṯyt* was the name of the sanctuary of Soker at Memphis and it became a general term for the whole necropolis or a sanctuary in one of the main temples[26]. It should be noticed that the sign *P* is written wrongly instead of the sign *t*.

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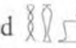
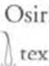
[23] Examples see: H. SELIM, *op. cit.*, p. 368(notes 74–75).

[24] PM II^2, p. 157.

[25] P. WILSON, *A Ptolemaic Lexikon*, Leuven 1997, p. 773.

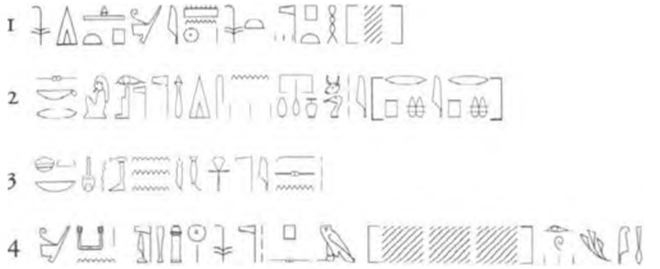
[26] *Loc. cit.*, p. 1038. For further information see: J. VANDIER, in: *Mélanges Mariette*, in: *BdE* 32, 1961, pp. 111–114; J.C. GOYON, *BIFAO* 65, 1967, p. 128(Nr. 176). ID., in: *RdE* 20, 1986, p. 92(Nr. 33). E. EDWARDS, in: *Egyptological studies in Honour of R. Parker*, 1988, pp. 27–36.

(c) *Wb* III, p. 157. The block-statue called  *ḥsi* later *ḥst*[27]. ALDRED linked this term to what was represented, namely the holy person of the pilgrim to Osiris[28].

(d) The sign *mn* written in two different forms  text 1(3), and in the text 3(2) in the name of the owner of the statue *Psmṯk-mn-m-W3st*.

2. The Base

One horizontal line of inscription all around the base starts from the left corner with the formula *ḥtp di nswt*.



1 *ḥtp di nswt n 'Imn-Rꜥ nswt nṯrw Ptḥ*

2 *Skr Wsir nṯr ꜥ3 di.sn pr-ḫrw t ḥnḳt k3w 3bdw ir[p irt ///]*

3 *[ḫ]t nb nfr wꜥb nḏm bnr ꜥnḫ nṯr im.sn*

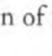
4 *n k3 n it-nṯr ḥm-nṯr 'Imn-Rꜥ nswt nṯrw Psm[ṯk-mn-m-W3st ms n nbt pr 'Irt]-ir.w m3ꜥ-ḫrw*

1 "An offering which the king gives (to) Amun-Re king of the gods, (to) Ptah

2 (to) Soker (to) Osiris the great god may they give an invocation offering of bread, beer, oxen, fowl, wine [milk ...]

3 (of) everything good, pure, sweet and pleasant by which the gods live

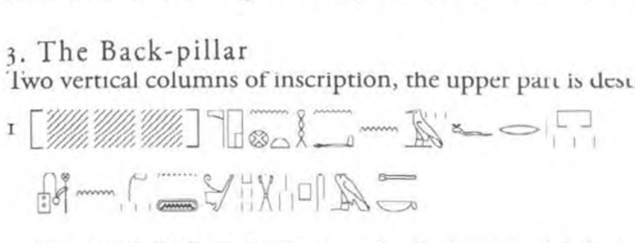
4 to the ka of god's father priest of Amun-Re(a) king of gods, *Psm[ṯk-mn-m-W3st* born of the lady of the house *'Irt]-ir.w*(b) justified."

(a) The name of god Amun is written in the texts of this statue in different forms such as:  2(1); 2(4); 3(1).

(b) The blank space before the name of his wife can be filled with the phrase, *ṯk-mn-m-W3st ms n nbt pr*. The name of his wife, although broken, probably can be restored as *'Irt-ir.w*, see: RANKE, *PN* I, p. 42(10).

3. The Back-pillar

Two vertical columns of inscription, the upper part is destroyed.



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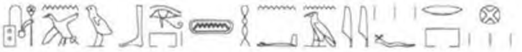
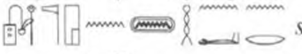
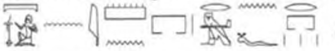
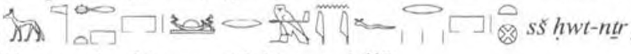
[27] M. EL-DAMATY, in: *MDAIK* 46, 1990, p. 2.

[28] C. ALDRED, *Egyptian Art*, London 1980, p. 133.

1 [*... sš*] *ḥwt-nṯr n niwt ḥnʿ n3i.f r3-prw sš n wʿbw n Ỉmn n p3* 4 *s3w Psmṯk-*
2 [*mn-m-W3st ...*] *W3st sm3-t3wy p3-ẖrd Psmṯk-mn-m-W3st m3ʿ-ḫrw s3 ʿḥms m3ʿ-ḫrw*

1 "[... the scribe] of the temple of the city together with its temples(a) the scribe of *wʿb*-priests of Amun from the four phyles *Psmṯk-*

2 [*mn-m-W3st* ...] *W3st* the god Somthus the child(b) *Psmṯk-mn-m-W3st* justified son of *ʿḥms* justified."

(a) Parallel sentences are found in the following examples:  *sš n p3 wb3 (n) pr Ỉmn ḥnʿ n3i.f r3-prw* "The scribe of the court of the temple of Amun together with its temples[29]".  *sš ḥwt-nṯr n Ỉmn ḥnʿ n(3y.f) r(3-prw)* "The scribe of the temple of Amun with its temples[30]".
In other examples the word *irm* is used instead of the word *ḥnʿ* such as in the following examples:  *ḥry ḥmt n pr Ỉmn (i)rm n(3i).f r3-prw* "The overseer of the craftsmen of the temple of Amun with his temple[31]".  *sš ḥwt-nṯr pr-Ỉmn (i)rm n(3)y.f r3-prw* "The scribe of the temple of Amun with his temple[32]".

(b) The god Somthus *sm3-t3wy* "Uniter of the Two Lands" was known from the Old Kingdom[33]. The god Somthus is represented in the iconography as a falcon-headed man or as a child with a side-lock placing his finger in his mouth and wearing the double crowns. His mother is the goddess Hathor. The name occurs in many compounds especially in Dendara temple *ḥr-sm3-t3wy p3 ẖrd s3 ḥt-ḥr* "Horus Somthus the child, son of Hathor"[34].

Comment

The statue of *Psmṯk-mn-m-W3st* maybe dates to the end of the 26th Dynasty, probably to the time of King Amasis according to the stylistic features of the statue. *Psmṯk-mn-m-W3st* wears a short pleated kilt, which extends to the middle of his thigh; the end of it takes a peaked form. This style of kilt is common throughout the 26th Dynasty[35] and I do not know of another example of this type of kilt dating to the time of the 27th to 30th Dynasties.

The chin and the false-beard of the statue of the god Ptah are formed as two entities, separated by a deep line or depression. The beard has been placed under the chin, and this style dates to the end of the 26th Dynasty[36].

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[29] Cairo Museum JE 37196 *cf.* E. BRESCIANI, in: *SCO* 25, 1976, p. 16.

[30] Statue of *Ns-Ỉmn*, Karnak temple, *cf.* J.C. GOYON, *Karnak VII*, 1982, pp. 282–283(G), with other examples.

[31] Cairo Museum JE 37399 *cf.* K. JANSEN-WINKELN, *op. cit.*, pp. 21–22(3), 336(Nr. 5 a).

[32] Cairo Museum JE 36576 *cf.* K. JANSEN-WINKELN, *op. cit.*, pp. 146, 148, 396(Nr. 25 e. g. 10).

[33] *Rmnw-k3* held the title *ḥm-nṯr sm3-t3wy* "priest of god Somthus" on his false-door at his mastaba in Giza which dates to the end of the 5th Dynasty *cf.* HASSAN, *Giza* II, pp. 169(4), 175(fig. 208).

[34] S. CAUVILLE, *Dendara* I, Leuven 1997, p. 385; EAD., *Dendara* II, Leuven 1999, p. 589; EAD., *Dendara* III, Leuven 2000, p. 542. Further information about the god Somthus see: H. BONNET, *Reallexikon der ägyptischen Religionsgeschichte*, Berlin 1952, pp. 728–729. M. DERCHAIN-URTEL, in: *LÄ* V, 1080–1081.

[35] Examples from the 26th Dynasty: Cairo CG 670, L. BORCHARDT, *Statuen und Statuetten von Königen und Privatleuten* III, Berlin 1930, p. 17, pl. 122. Cairo JE 37855, S. PERNIGOTTI, in: *SCO* 21, 1973, pp. 303–313, pl. II. Baltimore W.A.G. 179, G. STEINDORFF, *Catalogue of the Egyptian Sculpture in the Walters Art Gallery*, Baltimore 1946, pp. 62–63(no. 179), pl. XXX. Petrie coll. UC 14627, A. PAGE, *Egyptian Sculpture Archaic to Saite from the Petrie Collection*, Warminster 1976, pp. 95–96 (no. 106). Thorvaldsen Mus. 356, E.K. LILLES, in: *SÄK* 6, 1978, pp. 99–100, pls. XXX–XXXI. Nantes, Musée Dobrée 1255, R. EL-SAYED, in: *BdE* 69, 1975, pp. 161–165, pls. XXX–XXXI. Berlin 8809, SCHAEFER, *Kunst*, p. 415(1). Cairo JE 38016, H. SELIM, *op. cit.*, p. 361, pl. 41. Hermitage Mus. 2901, A. LAPIS/E. MATE, *Skulptura*, 1937, pp. 109–110(no. 117), pl. III, fig. 73.

[36] H. DE MEULENAERE/B.V. BOTHMER, in: *Kêmi* 19, 1969, p. 14.

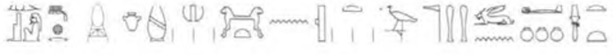
III. The Kneeling Naophorous Statue JE 36987 in the Cairo Museum (Taf. 24)

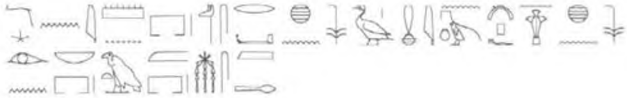
This kneeling naophorous statue of *Wsr-ẖnsw* made out of limestone measures 46 cm in height. This statue has never been published and is not listed in *PM*. Although it has no recorded provenance, its inscription indicates that it came from Thebes. *Wsr-ẖnsw* wears the *ẖ3t* or bag-wig, which is worn straight across his forehead, behind the ears, its rounded ends resting on his shoulders and its rear partially concealed by the top of the back-pillar. He kneels sitting on his heels with his feet at right angles to the base and his toes splayed out. He has a full oval face, the eye sockets are shallow and the upper lids are worked in raised relief. The eyebrows, shown in the same way, curve over the eye and end abruptly at the temples. He has a flat nose with nostrils chiseled out. His mouth is small with drilled holes at the corners, and well-modeled lips. He wears a short, tightly pleated kilt on a wide waist-band, the pleats being depicted with incised lines. He holds a naos between the fingertips of his outstretched hands. The naos is a rectangular plain box with a flat roof. A figure of god Osiris stands without platform within the naos. He holds his right hand above the left, with the flagellum in the former and *ḥḳ3* scepter in his right fist.

The Texts:

1. The Back-pillar

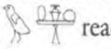
Two vertical columns of hieroglyphs between vertical lines.

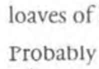
1 

2 

1 *im3ḫ ḫr Wsir ḥtp ib m*ᶜ*r spw 3ṯ.t n iswt ḏḥwty ḥm-nṯr ḥm wn ḥnk(-nww) w*ᶜ*b sḫmt*
2 *mr sb3(w) n pr 'Imn Wsr-ẖnsw s3 mi nw K3p.f(-n)-ḥ3-ẖnsw ir n nb(t) pr Mwt-m-pr-ms m3*ᶜ*-ḫrw*

1 "The honoured one in the presence of Osiris who pleases the heart(a) successful(b) tutor of the crew of Thoth(c) *ḥm wn* priest(d) *ḥnk(-nww)*(e) *w*ᶜ*b* priest of Sakhmet(f)
2 overseer of teachers of the Amun temple(g) *Wsr-ẖnsw* son of the like-titled *K3p.f(-n)-ḥ3-ẖnsw*(h) born of the lady of the house *Mwt-m-pr-ms*(i) justified."

(a) May be read *ḥtp ib* meaning "pleased heart". This word consists of two signs: The first sign is an unusual sign representing a four-legged table upon which a vase was placed, perhaps to be  read *wdḥw* "offering table" which usually is written also with the determinative of the four-legged table with loaves of bread and libation vase[37].

Probably the sign is a cryptographic sign to be read *ḥtp* meaning "to please", compare the word  *ḥtp* "table" which is also written with the determinative of the four-legged table upon which offerings were placed[38]. The second sign is the heart sign. *ḥtp ib* is an uncommon epithet mentioned in the pyramid texts spells 854, 905 and in the biographic inscription of *Rḫ-mi-R*ᶜ[39].

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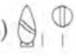
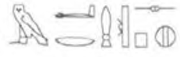
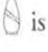
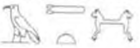
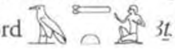
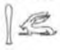
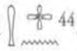
[37] *Wb* I, p. 393(14).

[38] P. Wilson, *A Ptolemaic Lexikon*, Leuven 1997, p. 687.

[39] A. Piankoff, *Le cœur dans les textes Egyptiens depuis l'Ancien jusqu'à la fin du Nouvel Empire*, Paris 1930, p. 117.

(b)  probably can be read  *mʿr spw* "successful"[40]. In that case the sign  is a cryptograph for the word *mʿr*.

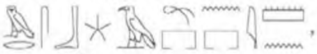
(c) *3ṯ.t n iswt ḏḥwty* "tutor(?) of the crew of Thoth" is also written in cryptograph form; the first sign is a bed with two lion's heads , read  *3ṯ.t* means "bed"[41]. This sign is a cryptograph sign indicating the word  *3ṯ.t* which is a title maybe translatable as "tutor"[42]. The phrase *iswt ḏḥwty* "crew of Thoth" is found also on the stela of *ḫrdw-ʿnḫ*[43].

(d) The title *ḥm wn* appeared for the first time during the 22nd Dynasty and was borne by priests of gods Amun and Monthu at Thebes. The meaning of the title *ḥm wn* is uncertain. It was written with different forms such as  and [44].

(e) For the title *ḥnk(-nww)* see statue JE 37425, text of the base (note e, above).

(f) For the *wʿb* priest of Sakhmet see: F. von Kaenel, *Les prêtres-ouâb de Sekhmet et les conjurateurs de Serket*, Paris 1984.

(g) The title *mr sb3(w) n pr Imn* was known from the 22nd Dynasty, found on the statue of *Ns-r-Imn*[45] and in the graffiti of *ḥr-3ḫbit* from Karnak temple[46].

Parker suggested that when the word *sb3yt* is written with the determinative of the house in the title , *mr sb3yt n pr Imn* means "the overseer of the school of the house of Amun"[47].

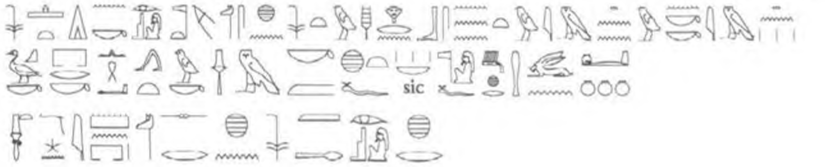
The title *sb3* is well known from the Old Kingdom. Jones translates *sb3* as either "instructor" or "pupil"[48]. Fischer translates the title *sb3(w) ḥr-ḫnty-pt* "pupil of Horus who presides over Heaven"[49].

(h) Ranke, *PN* I, p. 342(7).

(i) *Loc. cit.*, p. 148(3). It will be noticed that the name in our statue is written with the *m* while Ranke's example is written *Mwt-n-pr-ms*.

2. The Base

A One line of hieroglyphic inscription in sunk relief all around the base between two incised lines.



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[40] *Wb* II, p. 48(13–16).

[41] *Loc. cit.*, p. 23.

[42] For translation of the title *3ṯ.t* as "tutor" see: H. Kees, in: *ZÄS* 82, 1957, pp. 58–62. Probably *3ṯ.t* can also mean "palace-official" and "provincial administration". Further references for the title *3ṯ.t* see: D. Jones, *An Index of Ancient Egyptian Titles, Epithets and Phrases of the Old Kingdom* I, Oxford 2000, pp. 3–4(14).

[43] Pelizaeus-Museum Hildesheim, Inv. Nr. PM 6352, see: K. Jansen-Winkeln, in: *MDAIK* 53, 1997, pp. 93–94, fig. 1(line 4).

[44] Examples see: J. Yoyotte, *BIFAO* 54, 1954, pp. 102–103.

[45] Cairo Museum JE 42221 see: K. Jansen-Winkeln, *Ägyptische Biographien der 22. und 23. Dynastie*, 2 Vol., *ÄA* 8, 1985, pp. 185(7), 188(6), 537(7).

[46] G. Vittmann, in: *SÄK* 30, 2002, pp. 352(4), 358(aa), 365(4–5).

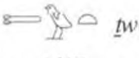
[47] Papyrus Brooklyn 47.218.3 see: R.A. Parker (ed.), *A Saite Oracle Papyrus from Thebes in the Brooklyn Museum*, Rhode Island 1962, p. 31, pl. 2.

[48] D. Jones, *An Index of Ancient Egyptian Titles, Epithets and Phrases of the Old Kingdom* II, Oxford 2000, pp. 883–884.

[49] H.G. Fischer, *Egyptian Titles of the Middle Kingdom. A Supplement to Wm. Ward's Index*, New York 1985, 1283b. For the meaning of this title see: M. Verner/V.G. Callender, *Djedkarw's Family Cemetery, Abusir* VI, Prag 2002, pp. 71, 73(note 4).

ḥtp di nswt n.k Wsir it-nṯr mry-nṯr Wsr-ḫnsw ṯw(t) ꜥḥꜥ ḥri n(n) bsi.tw im.sn n(n) wn k3.k im.sn ꜥḳ.k pr.k nn šnꜥ.tw.k sḫm.k m ḫftyw.k im3ḫ ḫr nṯr.f ḥm-wn ḥnk(-nww) wꜥb-sḫmt mr sb3(w) n pr Imn Wsr-ḫnsw m3ꜥ-ḫrw ḫr Wsir

"An offering which the king gives to you Osiris god's father *mry-nṯr Wsr-ḫnsw* you(a) are one who stands far away(b) there is no one(c) who introduces(d) you among them and your Ka shall not be(e) among them(f) you can come in and go out without being turned back, you shall be mighty over your enemies, the honoured one in front of his god *ḥm-wn* priest, *ḥnk(-nww)* priest, *wꜥb* priest and overseer of teachers in Amun temple *Wsr-ḫnsw*, justified in front of Osiris."

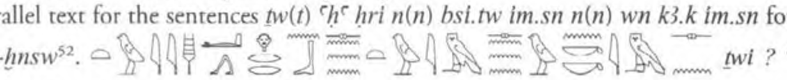
(a) Probably *tw* is here an equivalent writing to the pronoun  *ṯw(t)*, the earlier form of the independent pronoun 2nd pers. sing. m. *ntk* which is found in the Pyramid Texts and Old Kingdom texts[50].

(b) *Wb* III, p. 146.

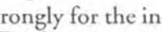
(c) The negation *n(n)* is written in alphabetic spelling which was commonly used in the Saite Period[51].

(d) The word *bsi* usually was written with the determinative of the fish or the two legs, but here it is written with the determinative of water.

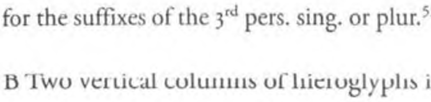
(e) The words *wn* and *k3* are written also in alphabetic spelling.

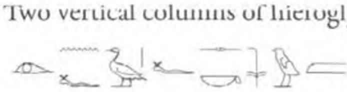
(f) There is a close parallel text for the sentences *ṯw(t) ꜥḥꜥ ḥri n(n) bsi.tw im.sn n(n) wn k3.k im.sn* found on the statue of *P3-ḫ3r-ḫnsw*[52].  *twi ? ꜥḥꜥ ḥry iry n(n) bsi.tw im.sn n(n) wn k3.k im.sn* "You?(A) stand far away from them(B) no one has introduced you among them and your Ka shall not be among them".

(A) Probably the demonstrative *twi* is written wrongly for the independent pronoun *ṯwt*.

(B) The sign *r* is an alphabetic spelling for  *iry* which is sometimes used as an unchangeable substitute for the suffixes of the 3rd pers. sing. or plur.[53].

B Two vertical columns of hieroglyphs inscribed on either side of the legs.

1 

2 

1 *ir.n.f s3.f sk.sw m ḫrt-nṯr*
2 *ḥm-nṯr Imn ḥnk(-nww) K3p.f-ḥ3-ḫnsw*

1 "Made for him by his son when he was in the necropolis
2 the priest of Amun *ḥnk(-nww)* priest *K3p.f-ḥ3-ḫnsw*."

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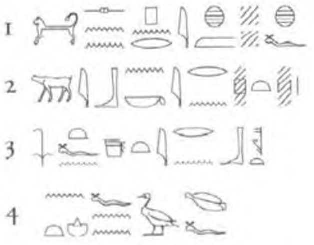
[50] A. GARDINER, *EG*, p. 53(64); *Wb* V, p. 360(5).

[51] For examples see: P. DER MANUELIAN, *Living in the Past. Studies in Archaism of Egyptian Twenty-Sixth Dynasty, Studies in Egyptology* 6, London 1994, pp. 81–82. K. JANSEN-WINKELN, in: *Or* 67, 1998, pp. 169–172.

[52] Baltimore, Walters Art Gallery Inv. 22.175 *cf.* G. STEINDORFF, *Catalogue of the Egyptian Sculpture in the Walters Art Gallery*, Baltimore 1946, p. 63(no. 180), pls. XXXI, CXVII(180a).

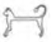
[53] A. GARDINER, *op. cit.*, p. 88(113).

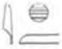
C Four vertical columns of hieroglyph inscriptions in front of the knees contain a protection text. I do not know another parallel for this text. The transliteration and translation may be as follows:

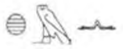


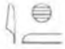
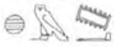
1 *mki snn pn r iḫm ḫ(wi).f*
2 *imy-ib n ky rn[p]wt*
3 *nḫb <n>.f n(n) ḏrw ir nbḏ twr*
4 *ndb.f nn sꜣ (r) iwꜥ.f*

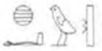
1 "The one who protects(a) this statue against destruction ?(b) by protecting(c)
2 what is in the heart(d) of another one (=the statue)(e) years(f)
3 shall be established(g) (for) him(h) without limits. As to the evil one(i) who will reject(j)
4 what he has heard(k), there will be no son (to) be his inheritor."

(a) The bed sign with the head of the lion  is read *mki cf.* F. DAUMAS, *Valeurs phonétiques des signes hiéroglyphiques d'époque Gréco-Romaine* 3, Montpellier 1990, p. 580(61), 581(65). Means "to protect" *cf.* P. WILSON, *A Ptolemaic Lexikon*, Leuven 1997, p. 471.

(b) There are two possibilities of reading this word .

The first possibility can be read *iḫm* and this writing is another variant writing to the word  *ḫm* means "know not" *cf. Wb* III, p. 278.

The second possibility is to read it *ḫmi* as "to destroy" and in that case, the writing of the word  is a variant writing to the word  see *Wb* III, p. 281.

(c) Probably the sign is an alphabetic writing of the word *ḫwi*  meaning "to protect" *cf. Wb* III, p. 244.

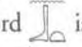
(d) The sign is read *imy cf.* F. DAUMAS, *op. cit.*, p. 273(377) and the word *ib* is written in alphabetic spelling.

(e) The phrase *imy-ib n ky* "what is in the heart of another one" referring to the statue.

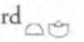
(f) The word *rnpwt* is written also in alphabetic spelling and I suggest the word should be reconstructed with □ *p* in the destroyed place.

(g) The sign is read *nḫb cf.* F. DAUMAS, *op. cit.*, p. 421(525), translate "established" *cf. Wb* II, p. 307(10).

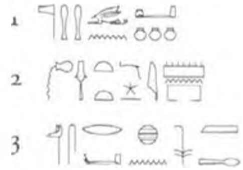
(h) The sign *n* is to be read twice, first with *n.f* "for him" and secondly with *n(n) ḏrw* "without limits".

(i) The word  is read *nbḏ* and means "evil" *cf. Wb* II, p. 247(4).

(j) The sign is read *twr* meaning "to purify" *cf. Wb* V, p. 253(5). There is another word *twr* with the consonants and the determinative of arms holding a stick which means "reject" *cf. Wb* V, p. 252(10).

(k) Probably the word  is to be read as *ndb* written in alphabetic spelling meaning "to hear" *cf. Wb* II, p. 367(19–23). The sign can be read *b cf.* H. W. FAIRMAN, in: *BIFAO* 43, 1945, p. 69(267a). ID., in: *ASAE* 43, 1943, p. 240(267).

3. Three vertical columns of inscription over the breast of the statue contain the titles and the name.



1 *ḥm-nṯr ḥm wn ḥnk(-nww)*
2 *wʿb sḫmt mr sb3(w) n pr-Ỉmn*
3 *Wsr-ḫnsw*

1 "*ḥm wn* priest(a) *ḥnk(-nww)* priest(b)
2 *wʿb* priest of Sakhmet overseer of teachers of the Amun temple(c)
3 *Wsr-ḫnsw*"

(a) For this title see statue JE 36987 text of the back pillar (note d, above).
(b) For this title see statue JE 37425 text of the base (note e, above).
(c) For this title see statue JE 36987 text of the back pillar (note g, above).

Comment

The statue of *Wsr-ḫnsw* can be dated to the 26th Dynasty. This dating might be supported by the orthography of the text in which some words are written in alphabetic spelling[54] such as: the negation *n(n)*[55] and the words *wn* and *k3*[56]. Also the stylistic features of the *Wsr-ḫnsw* statue support the previous dating. The eyebrows and the cosmetic lines of the *Wsr-ḫnsw* statue are worked in raised relief. The rim of the eyelid barely extends beyond the corner of the eye. This type of eyebrows becomes fashionable in the reign of Psammetich I and Apries and persists throughout the time of Amasis until the beginning of the Persian Period[57]. *Wsr-ḫnsw* wears a short pleated kilt with peaked end, which was known during the 26th Dynasty and not represented from 27th to 30th Dynasties[58].

Abstract

The three naophorous statues which are the subject of this article are in the Cairo Museum. The first one is the statue of *ʿnḫ-p3-ẖrd* (JE 37425), his titles are priest of *K3-mwt.f*, *ḥnk(-nww)* priest of Upper Egyptian Heliopolis, scribe of the temple in his month of the Amun temple from the third phyle, scribe of the cadaster and acolyte of Amun Karnak. The second, the statue of *Psmṯk-mn-m-W3st* (JE 37210), his title is god's father priest of Amun-Re king of gods. The third, the statue of *Wsr-ḫnsw* (JE 36987), his titles are *ḥm-wn* priest, *ḥnk(-nww)* priest, *wʿb* priest of Sakhmet and overseer of teachers of the Amun temple. The statues can be dated to the 26th Dynasty, on the basis of the iconography of the texts, the naophorous type, their costume and the stylistic features.

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[54] H. de Meulenaere, in: *Egypte: Afrique & Orient* 28, 2003, p. 64.
[55] See the text of the base (note c, above).
[56] See the text of the base (note c, above).
[57] For examples *cf.* H. Selim, in: *MDAIK* 56, 2000, p. 369(notes 76–77).
[58] For examples see statue JE 37210, footnote n. 35.

The Temple of Amenhotep III at Thebes
Excavation and Conservation at Kom el-Hettân
Third Report on the Fifth Season in 2002/2003

By Hourig Sourouzian, Rainer Stadelmann, Myriam Seco Alvarez, Laurent Bavay,
Helmut Becker, Philippe Bromblet, Mourad El-Amouri, Samia Emara, Jens Linke,
Frédéric Pernel, Franz and Mary Schubert, Fritz Wenzel

(Tafeln 25–32)

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The Colossi of Memnon and Amenhotep III Temple Conservation Project, working under the auspices of the SCA, carried out its fifth consecutive campaign last season from 11th November 2002 to 30th January 2003[1].

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[1] The project members wish to thank Dr. Zahi Hawass, Secretary General of the SCA, for kind permission to work and for his strong support and assistance; Mr. Sabri Abd el-Aziz, for long co-operation and constant backing. The project enjoyed the co-operation of the Inspectorates at Thebes, thanks to Mohamed Bialy and Ali el-Asfar, directors of Egyptian Antiquities on the East and West Banks respectively. We are deeply obliged to Dr. F. Schubert, director of the COMMAP team for the courtesy of a modern and precise topographic mapping of the site, thanks to the co-operation of the Fachhochschule Deggendorf; the Siller Co. in Weiden, Bavaria, for the courtesy of a complete Trimble 5603 DR 200+ Total Station. Special thanks are due to Dr. Joseph Dorner for his friendly participation in the mission and for his enormous help with the corrections of the old measurements and clarification of the excavation documents.

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Hourig Sourouzian, Rainer Stadelmann, Myriam Seco Alvarez, Egyptologists; Tayeb Gharib Mahmoud, Egyptologist and representative of the Supreme Council of Antiquities; Joseph Dorner, engineer and archaeologist; Franz Schubert, director of the mapping project COMMAP, Mary Schubert, Johann Gerner, Florian Gessler, Mattias Sogerer, Wolfgang Gerner, Franz O. Schubert, team of archaeologists and surveyors, with computer sciences; Mourad El-Amouri, archaeologist; Frédéric Pernel, hydro-geologist and Philippe Bromblet, geologist, advisors in stone studies and soil investigations; Fritz Wenzel, advisor in structural engineering and conservation of the Memnon Colossi; Stéphane Rousseau, architect and artist; Sophie Duberson, Jens Linke, Pierre Zwetkow, stone conservators; Tayeb Hasan Ibrahim, assistant conservator; Ali Hasan, Ahmed Mohamed Ali, trainees in conservation; Jeronimo Seco Velasco, advisor in conservation; Cyril Delaporte, stone mason; Helmut Becker, Bernhard Illich, geophysicists; Laurent Bavay, ceramicist; Christian Perzlmeier, Anna Hofmann, Anja Stoll, students in Egyptology; Gabriele Barnickel and Martina Störl, documentists and trainees in epigraphy; Peter Mayr, assistant in documentation.

The team of workmen was first composed of 170 men under the supervision of Rais Mohamed Ali and three companion chiefs of works. During the last month, 110 workmen and three chiefs of works were employed.

I. Outline of Works during the Fifth Season

1. Defoliation

As in every year during the summer the site was again infested by wild plants and as usual, the necessary annual mechanical defoliation took place during the first two weeks of our season. It was recommended not to use toxic herbicides which could infest the surrounding fields. The Laboratory of Controlling Pests and Weeds from the Centre of Preservation and Conservation of Antiquities of the SCA continues to conduct research on a special (non-toxic) herbicide against the devastating vegetation. Mrs. Samia Emara, from the Centre of Preservation and Conservation of Antiquities, kindly gave us a report on her research from which we gratefully extracted the following information concerning the infested site. The three major weeds of our site are the *halfa* grass (*Desmostrachya bipinnate,* Family *Graminae*), the common reed (*Phragmites australis,* Family *Graminae*), and the thorn or *agul* (*Alhagi maurorum,* Family *Leguminoseae*)[2]. As the report points out, the study of the weeds and experiments on the site have shown the failure of mechanical methods to eradicate the wild plants, resulting in the

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N. Dürring, M. Moosauer, C. Von Pilgrim; Kh. Nagy and C. May Sheikholeslami. We are very grateful to M. Schubert who besides supporting the COMMAP work, kindly revised and edited the English text.

For previous reports on our works, see: R. Stadelmann/H. Sourouzian, *Der Totentempel Amenophis' III. in Theben, Grabungen und Restaurierung am Kom el-Hettân,* in: *MDAIK* 57, 2001, pp. 271–280, pls. 43–46; R. Stadelmann, *The Mortuary Temple of Amenhotep III,* in: *Egyptology at the Dawn of the Twenty-first Century,* Proceedings of the Eighth International Congress of Egyptologists Cairo 2000. AUC Press, Cairo 2003, Vol. I, pp. 470–473, figs. 1–4; H. Sourouzian, *Recherches aux temples thébains d'Aménophis III (Kom el-Hettân) et de Merenptah à Thèbes, CRAIBL* 2000, juillet–octobre, pp. 1022–1023, 1032–1038, figs. 11–15; H. Sourouzian/R. Stadelmann, *The Temple of Amenhotep III at Thebes. Excavation and Conservation at Kom el-Hettân (Second report on the third and fourth seasons in 2000/2001 and 2002),* in: *MDAIK* 59, 2003, pp. 425–446, pls. 71–76.

[2] See the abstract of S. Emara's report below, p. 223f.

choice of chemical control. The most recent method can be applied in autumn 2003 and should considerably reduce the growth of the grass. However, the growth of the camel thorn is still not entirely under control.

2. Mapping Project (Figs. 1–2, see sheet 1 and 2 in pocket at back of volume)

One of the major tasks of our project since the beginning of our work was a complete survey mapping of the site, including detailed maps in which past and present excavation results are integrated. This work was offered to our project by the kind courtesy of COMMAP (Colossi of Memnon Mapping Project), under the direction of FRANZ SCHUBERT, archaeologist and scientific member of the CAE at Mont Beuvray[3], France, in co-operation with the FH (University of Applied Sciences) Deggendorf, Germany. The scientific work and the organization was supported by MARY SCHUBERT. The FH Deggendorf was represented by Dipl. Ing. J. GERNER, who was assisted by two civil engineering students, FL. GESSLER and M. SOGERER. Two specialists in computer sciences assisted the team: W. GERNER helped in the fieldwork and F.O. SCHUBERT carried out a photo documentation of all the measured building remains, which he archived in a repository.

A detailed topographic and archaeological survey mapping of the temple precinct was made (Figs. 1–2), using the most modern theodolite, a complete Trimble Total Station (Trimble 5603 DR200+), from 18th November to 16th December 2002. COMMAP surveyed an area 700 m long and 150 m wide, the result of which made it possible to give a clear topographic map with an elaborate topographic system using the main axis of the temple as the principal measuring line, with fixed points ranging from between the Colossi of Memnon to the entrance of the Peristyle Court. Hence it was necessary to check and adjust our previous co-ordinate system, where the zero point lay on the axis within the Peristyle Court and which was composed of x and y co-ordinates, each having a positive and a negative value. The co-ordinates x = 0 m and y = 0 m of the zero point of the old system were now replaced by the co-ordinates x = N1000 m and y = W1000 m. This change meant that 1000 had to be added to all previous measurements taken from the old system. The new system is advantageously clear and avoids confusions and mistakes.

A grid of squares measuring 10 m x 10 m is now distributed to the north and the south of the main axis line. This new system has further offered the advantage of a permanent numbering system for the squares, in which the terrain is now finally divided. We abandoned the older system for numbering the excavation squares within each temple unit. From the main axial line all the squares are now identified, firstly by the western y co-ordinate point, and distinguished from the axis line northwards as Axis x North 1, North 2, North 3, etc, and southwards as Axis x South 1, South 2, South 3, etc. These will be respectively abbreviated as x N1, N2, N3 and so on, and x S1, S2, S3 … This simple system does not involve confinements or limitations to arbitrary square numbers and avoids confusion by eliminating all risks of repetition of the already given numbers.

The precise topographic map of the whole site is not only compatible with all former mapping points and systems but it will also integrate all past and future excavation maps.

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[3] An archaeological/topographical research project GeoTopoCart had been successfully carried out for many years under the direction of FRANZ SCHUBERT in Bibracte on Mont Beuvray. Due to the modern methods and effective results of archaeological/topographic prospection, surveys and cartographical documentation, we inquired if a similar survey on the site of Kom el-Hettân could be carried out. Although the assumptions and the archaeological and technical tasks were completely different from the work at Mont Beuvray, F. SCHUBERT was able to meet these new challenges and unknown demands. See the report of F. and M. SCHUBERT below, p. 215–223.

3. Archaeology and Conservation

Our work concentrated mainly on the Peristyle Court, where we carried out the clearance, documentation and conservation from the beginning until the end of the season. At the approach of the Second Pylon we resumed work after defoliation, from 21st December to the end of the campaign. Parallel to this, we started clearing the Hypostyle Hall and made sondages and prospections at the northern and the western peripheries of the temple, in search of remains of the sanctuary and the enclosure wall. Observations and conservation continued at the Memnon Colossi, and we also began with a preliminary conservation plan at the Third Pylon.

The following is a résumé of our work on the site of Kom el-Hettân (in topographical order) during the fifth season. A more detailed record on the temple divisions presented here will be further described in the respective reports.

3.1 The conservation of the Memnon Colossi had begun with a photogrammetric survey and continued last year with the cleaning, emergency conservation work, and study of the statues and the ground, under the direction of R. Stadelmann. The study continued this year, their mapping was completed, exact measurements obtained and geological observations made on their socles[4]. (Tf. 25)

3.2 At the Second Pylon, we uncovered the northern colossal statue again, which was mapped, drawn and measured. A study for its future conservation and presentation is in preparation. (Tf. 26, 27, 28 a)

The torso of the southern colossus, which we had partially uncovered during our previous season and had reburied with fine sand, was left untouched during this season. We covered it with more sand to protect its visible surfaces from the damaging effects of salt.

Simultaneously, with the help of C. Delaporte and the stone specialists, we replaced the upper part of the group statue in limestone (Tf. 28b, c), which had been raised above ground water level during the previous season. The stone was then studied by S. Duberson and J. Linke, with regard to its future conservation.

3.3 The Third Pylon. In the past, the passage to the Third Pylon or gate was guarded by two royal colossi of alabaster[5]. Today three large blocks, half submerged and surrounded by reeds and camel thorn mark the approach to the Third Pylon. Two of these blocks belong to the northern colossus: one consists of a monumental bust which has fallen face downwards, with the head covered by the royal *nemes* headdress; the second being the lower part of the king, seated on the throne and wearing a pleated kilt. The third block in the south is shapeless and bears no recognizable feature on its visible surface. Not having the means and the specialized restorers to treat these statues at present, we freed the blocks from vegetation and rubble and finally protected them with heaps of fine sand. The study and the full documentation of these colossi will be one of our tasks in the future. (Tf. 28d)

Towards the south of the Third Pylon, the alabaster crocodile sphinx was examined by the geologist P. Bromblet as well as the stone conservators Duberson, Linke and Zwetkow. Trial cleanings were made on the lower back part of the socle. The trench from which the sphinx had been raised by the Antiquities Department in the 1980s, was actually filled with rubble and garbage and thus had to be cleaned in order to find the original ground level, which was then recorded by the team of topographers from COMMAP. We recovered and conserved three large fragments of alabaster, which seem to derive from one of the royal statues nearby. One of these pieces is smoothly polished on one side and bears on its back a long attachment, which seemingly served to slide the piece into the corresponding slot of a larger part of a sculpture. This type of addition or repair can also be observed on a loose alabaster block stored near the larger alabaster colossus parts, which seems to have completed (or repaired) the rounded part of a torso. We further sifted the rubble to collect all alabaster fragments and splinters, which we then stored.

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[4] See reports of R. Stadelmann, J. Linke and Ph. Bromblet, below pp. 178–186.

[5] L. Habachi/G. Haeny/W. Ricke, *Untersuchungen im Totentempel Amenophis' III.*, *BÄBA* 11, Wiesbaden 1981, pp. 57–58, pl. 10b, c (hereafter cited as *BÄBA* 11).

In this area the level of the water table was at 74.24 m on 1st December 2002. Drills made around the trench at 73.04 m, 1.20 m below the water table, revealed only homogeneous Nile silt. The same observation was made on the floor of the trench where it was presumed that a pedestal would be found. Was the crocodile sphinx and its monolithic base simply placed on a mud washed floor without a pedestal? A parallel situation was observed in the limestone group statue in the Second Court. This question will remain unanswered until the ground water problems are solved and careful examination of the floor is possible.

3.4 In the Great Peristyle Court, clearance, mapping and conservation works were carried out during the whole winter season 2002–2003. Clearance continued from the beginning of the season to the end by M. Seco Alvarez in the southern part, and in January by M. El-Amouri in the east. Thus the passage to the court and part of the eastern portico were cleared again for architectural mapping (Fig. 3 and Tf. 28e), and the southwestern sector of the open part of the court was excavated (Tf. 29a, b and Figs. 3–9). There we discovered fragments of royal statues in sandstone (Tf. 29c–f), as well as large parts of royal colossi in red granite: The head of one colossus (Tf. 30a), with part of its torso, as well as a pair of feet placed on a base which is decorated with representations and cartouches of southern foes (Tf. 30b), thus adding a new list of African place names to the traditional records. Ch. Perzlmeier and A. Hofmann continued the documentation of the recovered wall fragments and statue pieces with G. Barnickel and M. Störl, who also pursued epigraphic survey. With the technical help of C. Delaporte and Hassan M. Ahmed, responsible for the transportation of stones, we made provisional groupings of parts of the royal colossi, such as the torso of the statue PWN I, which is now temporarily reassembled on a bench (Tf. 31c, d), and has been drawn to scale by S. Rousseau who calculated the proportions of the statue with the help of elements conserved from other statues of the court, and completed the iconography of the king with a drawing of the head which is conserved in the British Museum (Fig. 10). S. Duberson and the team of conservators continued the meticulous reassemblages of the very damaged and fragmented base of the statue PWN V (Tf. 31e, f). P. Zwetkow completed his training in stone conservation by studying the quartzite and treating the colossal head of the statue PWN III (Tf. 31a, b), which was fragmented and had been heavily damaged by fires in the 1970s, then hastily restored and since then badly conserved[6]. More parts of the North Stela were laid together in a group immediately north of the standing South Stela at the entrance of the Peristyle Court.

3.5 The Hypostyle Hall had been covered by debris and refills for many centuries and only some bases of columns were visible in the south half, where our predecessors had partially excavated and summarily indicated the remaining column bases on the map. As the exact limits of this hall are as yet not known, it was necessary to map this part of the temple.

Removal of the vegetation was followed by thorough clearance of the different mounds of rubble, which were roughly designated as Middle Hill, West Hill and South Hill. We sifted all these remains and recovered small fragments of statues in granite, one piece in alabaster, which seemed to belong to the pleated sleeve of a royal statue (inv. no. 1373; h 19 cm), as well as some sandstone fragments of wall decoration from earlier excavations. These finds were recorded. When the entire surface was levelled out, we began excavating according to our new axis system (Tf. 32a). The zone was cleared by M. Seco Alvarez. A plan of the architectural remains, including preliminary observations of the base of the columns, was drawn by M. El-Amouri (Figs. 12, 13)[7]. A thorough research on the architectural elements of the temple precinct and on the types of columns will be the task of Nairy Hampikian in the forthcoming seasons.

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[6] See below, pp. 200f.

Between the northernmost four bases of columns in the southern half of the Hall, we rediscovered a deposit of six statues of Sekhmet and part of a sandstone sculpture of unknown type (Tf. 32b). All finds were recorded and documented by Ch. Perzlmeier, and the statues of the goddess Sekhmet were cleaned by S. Duberson and the restoration team, and stored in the site magazine. (Tf. 32c, d)

4. Archaeological Sondages (Fig. 1)

4.1 In the area of the sanctuary, M. Seco Alvarez and J. Dorner cleared one square 10 m x 10 m, on the south side of the axis (1120 S1), at a depth of 2.30 m. The earth was quite hard and of a uniform dark colour. However, apart from surface debris containing small inscribed or decorated fragments, no major remains have been uncovered at this point and only a few small pottery shards with no representative features were recovered.

4.2 We continued making sondages in the peripheral zone of the uncultivated land in order to detect remains of the enclosure wall, which has not yet been confirmed. To the north of the Hypostyle Hall, J. Dorner opened a trench of 4 m x 4 m width and 1.20 m depth between the antiquities ground and the neighbouring field, without revealing any brick structure suitable to indicate the trace of the enclosure. The debris contained only a few worn stone splinters and pottery shards of the Late Roman Period.

Another sondage was made by M. Seco Alvarez and J. Dorner at the extreme west-end of the site (1160 S1 and N1) in order to estimate the limits of our temple and the archaeological area. A house occupies this zone, and the encroachment by neighbouring houses, hotels, and their ever-expanding gardens, is inevitable. Likewise, the system of water supply to the village and inspectorate across the road is equipped with pipes, which inundate the westernmost sector of the site. Here we unearthed modern pipes and protecting walls, but water leakage made further clearance difficult. A petition was made to the municipality, through the inspectorate, for permission to move the pipes ten metres towards either the houses or the road. Our petition had not been answered by the municipality up to the time we stopped the survey, at the end of the season. The sondages in search of major structures will be continued next season.

5. The Pottery (Figs. 14–16)

Laurent Bavay of L'Université Libre de Bruxelles studied the pottery excavated during the 1999 to 2002 seasons. The Late Roman (Byzantine) Period and the New Kingdom represent the largest portion of the ceramic material. The abundance of shards belonging to the typical water-wheel pots (*qadus*) is a possible indication of agricultural activities on the site during the Byzantine Period. Fine wares are also present, notably Aswan Red Slip wares. Cooking vessels are unusually rare, which would also point to a non-permanent occupation of the area. This Late Roman pottery can be dated mostly to the 5th and

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[7] See the reports of M. Seco Alvarez and M. El-Amouri below, pp. 206–208.

6th centuries AD. The Pharaonic Period is represented by a fairly large amount of 18th Dynasty pottery, including ring-based cups, beer jars, etc. Some shards, including probable imports from Lower Egypt, document activity on the site during the Ramesside Period (well attested during the reign of Merenptah). A noticeable feature of the New Kingdom material is the abundance of shards belonging to wine amphorae produced in the oases of the Western Desert, whereas the usual Canaanite amphorae appear to be absent.

6. Hydro-geology (Figs. 17–19)

Frédéric Pernel, hydro-geologist of Antea Ingenierie and Philippe Bromblet, geologist of Laboratoire de Recherches des Monuments Historiques, France, carried out studies of the soil, water and salts from 6 to 13 January 2003. Related problems were examined by Said Wahba and Eng. Ayad Thabet, representatives of the Irrigation Directorate from the Governorate of Qena. Up to now, all studies have pointed to one common recommendation: Before a global solution can be found to isolate antiquities of the Nile valley which are surrounded by irrigated lands, an appropriate temporary solution will have to be implemented, such as installation of a drainage system around the working area[8]. For the present we will continue to measure the level of the water on a fixed point in the Great Peristyle Court every day during the whole year.

7. Geo-physic and Radar Sensing (Fig. 20)

Around the Colossi of Memnon, the colossi of the Second Pylon, and in the north-eastern corner of the Great Peristyle Court, Helmut Becker of Landesamt für Denkmalpflege, Munich, undertook geo-electric sensing from 10 to 16 January 2003. His results enabled us to carry out archaeological sondages and plan future excavations[9].

Bernhard Illich of Gesellschaft für Geophysikalische Untersuchungen, Karlsruhe, carried out radar soundings. On the northern and eastern sides of the base of the northern Memnon Colossus the radar detected a certain resistance. This may indicate the presence of parts fallen from the statue prior to the replacement of the bust during the Roman Period, or of parts from the base of the statue that was partly restored in the 1950s. Careful clearance of this area could be considered, following consolidation of the ground, and may lead to the discovery of the original head or bust of the colossus.

Further investigations were carried out around the Second Pylon, particularly behind the North Colossus, in order to detect traces of foundation and fallen statue parts. Parallel to the radar and geophysics examinations, the team also undertook a series of soundings with drillings, to detect the position of the socles of the colossi, which had fallen in front of the Second Pylon. Large rectangular shapes on both sides of the axis seem likely to attest to bases of the colossi *in situ*, and will be uncovered next season for documentation and study.

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[8] See the report of F. Pernel below pp. 224–232.

[9] See the report of H. Becker, below pp. 232–235; see also the report on the prospections at the Memnon Colossi and at the Second Pylon, below p. 179 and p. 186f.

8. Documentation and Plan for a Future Site Museum

All finds, from large blocks to the smallest undecorated splinters were recorded and assembled in categories or groupings. CH. PERZLMEIER carried out the documentation throughout the season. Temporary documentation and epigraphic work was undertaken by G. BARNICKEL, M. STÖRL, A. HOFMANN and P. MAYR.

We also made an inventory and documentation of the sculpture parts from Kom el-Hettân in Theban magazines and tombs where some of these objects are temporarily stored through the kindness of the inspectorate. For TT 33, we were allowed access to the inventorial books. By kind permission of the general director in Thebes, M. BIALY, and the field director of the Chicago Oriental Institute, R. JOHNSON, and in co-operation with the inspectorate, we were also granted access to the storerooms of Medinet Habu. CH. PERZLMEIER and a team of workmen specialized in stone, were allowed to work in two storerooms and the open air block yard of Medinet Habu, to make a list of all Amenhotep III statue parts and blocks derived from Kom el-Hettân. Some statues had been found during the excavations of RICKE and HAENY, which included a standing statue of Sekhmet[10]. Several inscribed bases belonging to standing statues of Sekhmet and other deities which had been previously stored in Medinet Habu, were recorded and published by L. HABACHI[11]. Other statue parts and blocks, found in these rooms and in the blockyard, are unpublished and will be studied by our team.

One of our tasks is to make an extensive list of the material found over a century in the temple precinct. This material consists of blocks and statue parts now stored in different magazines of the SCA at Thebes. It is necessary to complete their documentation and to plan to have all this material restored in a conservation and presentation project within the temple precinct and in the future site museum.

We also finished the installation of windows, the painting and the furnishing of the temporary workshop, which will eventually be transformed into a site museum. All decorated and inscribed blocks, as well as fragments of sculptures have been numbered, recorded and stored.

The project this year was honoured by the visit of Dr. ZAHI HAWASS, Secretary General of the Supreme Council of Antiquities, and inspected by a high committee of specialists and advisors of the SCA, under the direction of Dr. MOHAMED SALEH.

H.S.

II. The Colossi of Memnon

1. Summary of the Work at the Colossi of Memnon

The Colossi of Memnon had been carefully and extensively cleaned during the last season in spring 2002 with a dry blasting of calcium carbonate[12]. During this procedure some parts of the surface of the Colossi were found too weak to be treated, especially the southern side of the South Colossus, which had constantly been weathered by winds from the south. During November and December 2002 methods of conservation of these weak surfaces by means of different natural and non-aggressive solutions, were conducted on small spots of the surface. Stone conservator P. ZWETKOW experimented with consolidents like ethyl silicate for consolidation, and methods for joining pieces of quartzite with soluble products. During the period of research and experimentation, which is to be continued next spring, no further intervention on the two Colossi should take place. The conservators S. DUBERSON and J. LINKE continued, however, their examination for the long-range conservation of the Memnon Colossi. Together with geologists they made analyses and observations for the future fine cleaning and careful conservation. The socles of the Colossi were also kept untouched for further study, as they comprise traces of the deposits of Nile alluviums from ancient inundations. All faces of the bases were, however, accurately measured, photographed, and mapped by the COMMAP team. Tests with dry blasting were made on an undecorated part of the socle of the South Colossus in order to determine the procedure for the cleaning of the more fragile surfaces of the Colossi. Consideration was given to the efficiency of the cleaning technique, the non-aggressiveness of the technique, the choice of the best abrasive, criteria of pressure and distance for the required conditions, necessity of preliminary consolidations, etc.

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[10] *BÄBA* 11, pp. 98–99, pl. 21a.

[11] *BÄBA* 11, pp. 98–100, pls. 33–35.

[12] See our second report in: *MDAIK* 59, 2003, pp. 444–445; and the report of J. LINKE below; see also J. LINKE, *Die Sitzstatuen Amenophis' III. (Memnonkolosse), Restaurierungsprojekt in Theben/Ägypten*, in: *Restauro, Zeitschrift für Kunsttechniken, Restaurierung und Museumsfragen*, Ausgabe 5, 2003, pp. 332–339, figs. 1–13.

The conservators' report recommends continual observation of the Colossi's behavior by constant surveys and measurements, and it was suggested that no attempt be made to fill the cracks before the structural behavior of all parts, with respect to eventual instabilities of soil, be known. They also recommend a comprehensive survey of the state of conservation of every surface part according to a grid, and that observation of the untouched surfaces should be continued following final analysis of pigments and binders.

Taking in consideration the sensible and dangerous situation of the foundations, any excavation or even the digging of small trenches around the Colossi is to be carefully planned. We therefore entrusted an experienced radar surveyor, BERNHARD ILLICH, with carrying out a dense survey in between and around the Colossi in all directions, especially to the east where greater fragments of the fallen torso and head of the North Colossus are assumed to be. Regrettably, the high level of the underground water, only 0.50 m under the surface, deprived us of all expected results. Most of the visible shadows which the georadar shows may be the results of earlier cultivation works in the fields of the Kom el-Hettân and around the Memnon Colossi which existed up to about 40 years ago. They do not reach levels deeper than 50 to 60 cm whereas the fragments of the Memnon Colossi must surely be assumed lying at a depth of about 5.00 m.

The long range conservation project of the Memnon Colossi also benefited from the study and advice of FRITZ WENZEL, structural engineer, senior conservator and professor at the University of Karlsruhe. Prof. WENZEL kindly followed the problematic conservation of the Memnon Colossi, recommended careful cleaning, minimum intervention after cleaning, as well as the removal of the parking lot in front of the Colossi.

R.S.

2. Report on the Structural Condition of the Colossi of Memnon

RAINER STADELMANN had already entrusted me with the static-constructional investigation of the two Colossi of Memnon following the photogrammetric and architectural survey on the Colossi during the years 1989 and 1990. During the process of cleaning of the Memnon Colossi in spring 2002, I was able to take advantage of the scaffolding around the Colossi to investigate intensively, for about ten days, their static-constructional condition and to report about my investigation. The following is the outcome of these investigations.

Before starting the work at Thebes, I re-examined all the available documentation on the Colossi, photogrammetric plans, photographs, descriptions of their condition, and correspondence about them.

I studied them thoroughly from a distance so that the situation and concerns about the existence of the two colossal statues would be familiar to me. In February 2002, Dipl. Ing. JÜRGEN MEIER, a specialist with experience in structure safety devices for historical buildings, and I examined the situation for days on the spot, discussing questions regarding the stability and condition of the stone Colossi with the project members, archaeologists, curators, craftsmen, as well as with colleagues from Cairo University. The most important issue was the complete picture of the Colossi's condition. To answer this I documented the situation intensively from the scaffolding. I paid special attention to the northern Colossus, whose torso had been rebuilt in Roman times from newly quarried sandstone blocks from Upper Egypt. From the scaffolding I was able to study the stone structure down to the most important details. I documented the entire situation and photographed it extensively.

What can be said about the stability of the Colossi? The two statues have stood *in situ* for more than three thousand years, with the rebuilt torso of the northern Colossus having stood for almost two thousand years. There is no proof of a continuing inclination or tilt of the statues. The relatively high ground water table and less than ideal soil conditions have already been explored by my experienced Egyptian colleagues. The long life of the statues and consolidation of the soil have obviously had no additional influence on the stability of the Colossi. Overall, no signs of degradation are recognizable. I was unable to determine any indication of recent movement or disturbance of the Colossi, nor could I find any evidence of an acute danger of collapse.

Obviously, the Colossi have survived the earthquakes of the last two thousands of years without any threat of damage. A perfect earthquake proof device is unrealisable. Any comprehensive precautionary measures against earthquakes are impracticable. Apart from that, such a construction would risk the loss of the historical and artistic value of the architectural monuments by large technical alienation.

I would now like to address in detail the stability of the Colosssi, which I had already examined intensively in the past. There are no new threatening fractures or cracks in the stones. I pursued, especially with the northern restored Colossus, the load erosion and power tractions. I also studied the supporting stones partly resting in the structure, which sometimes project rather far off the structure. Short splitting tension cracks are located in various places. I could not, however, determine a partial or full occurrence of danger. Despite the already existing splits, joints, cavities, tears and defects in the structure, a collapse in the stability of its substantial parts is not probable.

My investigations of the Memnon Colossi, which were made as carefully as possible, as well as my long experience with the structural safety of other historically important monuments – and the errors occasionally made therein – have guided my conservative and careful advice. There were some scarcely measurable points of support in the individual stone blocks that could be improved by local plugging or filling with mineral mortar in the northern Colossus. For the splitting tension cracks in individual stones, mentioned above, I would recommend joining them together by the injection of synthetic resin. I would warn against wide or large volumes of adhesive being added to the stone structure. The same applies to any ideas of links by anchors, possibly still connected with the restoration of longer anchor drillings in or by the rock. My urgent advice is to avoid such methods. The stone structure is exposed to extreme variations in temperature. Associated daily expanding and pulling together of the structures are now, to a large extent, possibly squeeze-free. Wide gluing and tightening (tension) anchors would obstruct the Colossi and could cause squeezing. Thus the structural condition would become unstable. Therefore, I cannot recommend it, nor would I bear responsibility for these measures. A flexible system, applied for the long term, can work with the new demands and endangerments to the Colossi.

As a conservator, I have accomplished positive preservation work in the last year. The work I have done has also been carried out with great caution. Removing the statically not effective application of mortar in the large gap of the northern Colossus has not influenced the stability of the structure. Removing and keeping vegetation and roots away from the Colossi are just as important as the periodic observation of the surface quality of the stones regarding decomposition and air pollution. The relocation of the nearby parking lot is absolutely necessary, both because of the exhaust gases and because of the traffic vibrations.

I hope I will be able to re-examine the condition of the Memnon Colossi in January 2004, when I will once again join the excavation and conservation work at Thebes.

F.W.

3. Report on the Cleaning and Conservation of the Memnon Colossi

During the last few decades the colossal statues of Amenhotep III were the subject of diverse investigation campaigns, which were basically confined to the stability and source of materials. In preparation for the present cleaning plans the two statues were put through their first restorative examination in 2001. According to the examination, the millennia old in-grown surface soiling was seen to be made-up of bird droppings, Nile sludge and air pollutants. The soil incrustations, trapped mostly in plaster and natrium chloride, endangered the stone surface and took away from the legibility of the inscriptions. Furthermore, it was possible to determine that small fragments threatened to fall off or could be lost due to cleaning.

A working concept was developed based on test samples and laboratory tests in close co-operation between H. Sourouzian, R. Stadelmann, Kärcher, Chemicals and Technologies for Polymers GmbH and J. Linke.

In the first examination phase it became clear that the conservational treatment of the statues would require work over a period of years. It can be assumed that new revelations will emerge through further intensive dealings with the object – these can be dealt with at a later to-be-determined date. Thus further restorative examinations of the statues formed a main part of the campaign 2001/2002. The 'cleaning' and safeguarding work was a conceptual part of the continuing examinations for the total conservation of the statues.

3.1 Removal of Marring Surface Accumulation and Cleaning Done by Alfred Kärcher GmbH & Co

The removal of incrustation and soiling was suggested not only for conservation purposes but also because the surface accumulations hinder views of the object. Apart from the removal of material and the accumulations which mar or damage the object, the cleaning should also be able to create better conditions for the examination.

The surface accumulation can be classified as incrustation and soiling, which are hardly embedded in the space between the first crystal layers. Soiling is made up mainly of atmospheric particles, dust, etc. which more or less adhere to the surface or the first grain layers of the surface. Thick incrustations can develop on surfaces which are protected from weathering. They are attached to the material's surface in such a way that they create a constant matt and dull surface. Incrustation and soiling are basically made up of the same substances. The main difference is to be found in the density and thickness. Both are solidly attached to the stone surface.

The entire surface of the natural stone, depending on the amount of exposure, was heavily soiled. The difference in colour was also noticeable. The original surface finish is only visible in a few areas. However, on closer inspection one notices that a large portion of the finish has been preserved and is merely dulled by the surface soiling.

Based on the results of the examination and the test areas created in 2001, it was possible to determine through a theoretical pre-selection, which particle blasting method would be the most suitable for the task.

The best cleaning results were achieved with calcium carbonate (0.04–0.14 mm, hardness according to Mohs 2.5) as a blasting medium, thus this was the only method used. Cleaning was done from top to bottom starting with the heads of the statues. The blasting medium together with the accumulated damaging substances from the cleaning was vacuumed up immediately. Special attention was given to protection of the cracks and openings from the blasting medium, since its solidification might lead to static problems.

With the dry blast cleaning medium calcium carbonate, a controlled layer-by-layer thinning of the soiling could be achieved. The oldest soil layers are more likely to be less aggressive than those of today. In order to protect the surface, only the potentially damaging layers of the soiling were removed. The original surface of the stone is harder than the calcium carbonate on the Mohs scale, therefore it was not affected by the dry blast and the original patina was left intact. On surfaces bearing traces of polychromy, we stopped the cleaning on a younger soil layer.

During the cleaning it became clear that a few areas show material damage in the form of crumbling. These areas were not cleaned, as they needed conservation before cleaning.

Plaster mortar from an earlier restoration was found in the crack of the northern sculpture. It was cracked, loose and half of it had already crumbled. The mortar has been removed except for a small area on the southern side. Behind this mortar, it appeared that fragments of stone, sand, dust and debris had accumulated, which then in turn created pressure on individual fragments.

3.2 Adhesive Sealing

Adhesive sealing conservative work restricted itself in the campaign initially to the safeguarding of around 900 small, loose fragments. The goal of the adhesive sealing was the fixation of detached pieces without affecting the static. Therefore, only small pieces, which were loose and threatened to fall off, were glued. Several adhesive sealings took place before the cleaning to prevent the loss of small pieces due to the blasting.

The required adhesion could only be achieved with organic adhesive. The climatic conditions required the use of a duroplastic adhesive – in general, epoxy resins seemed appropriate. In order to ensure that a suitable material be used, the decision was made with support from Chemicals and Technologies for Polymers GmbH. The resins, hardener and added materials were chosen and tested in a laboratory in 2001. A low-viscosity resin and hardener based on aliphatic polyamine were used. Kaolin was used to prevent running and to influence the E-module.

Several parts of the work of the campaign are summarised in a document. The document contains the examination results and a restorative theoretical treatment for the existing object, a hypothetical damage cause analysis and a graphical representation of the measures taken. All of the areas worked on have been documented in photos and can be localised with the use of the graphical depictions.

3.3 Observations

The sculptures and bases are made up of reddish, light-striped silicified sandstone. The southern Colossus reveals a massive black vein at the rear.

A number of repairs concentrated in the area around the crack on the northern Colossus were noticeable. Without any doubt the repairs go back to the Pharaonic Period, which could lead to the conclusion that the block was already in a poor state at that time. Perhaps the crack seen today was a result of weaknesses in the material. The older repairs on the socles will have to be examined carefully.

Shattered spots, missing fragments, cracks and dislodged stone pieces are the worst threats to sculptures. The entire breakage of the bust of the northern Colossus (27 BC) was documented. Countless other cracks run all over the sculptures and the socles. Cracks varying between 0.5 mm to several decimetres in width can be seen. Smaller cracks (micro cracks) can only be localised with optical aid.

All cracks separate the material either entirely or partially and occur mostly in the vertical direction. Loose or fallen fragments are the results of cracking. Since the stone does not show any noticeable stratification, the deformation of the sculptures is not necessarily due to cracking. The fragments are still connected within the cracks and only the expansion of the cracks leads to the loss of pieces.

The strain the climatic effects had on the Colossi left a strong impression on me during the work. Due to large differences in temperature some pieces loosen themselves in the early morning by contraction and then, due to dynamic thermal expansion, they are wedged into place again.

Monolithic monumental sculptures usually cause static problems, which can hardly be controlled. The thermal expansion coefficient for 1 m alone at a temperature difference of 30° C is for quartzite 0.2 to 0.3 mm, which means that the expansion at 15 m is 4.5 mm. Since the stone does not warm up evenly, different kinds of stress are created, which in turn cause cracking. Through the falling away of loose particles, the cracks can no longer close and continuously become larger – the result is breakage.

As can be assumed from the material make-up, the silicified sandstone showed hardly any sign of weathering. The grain structure can be appraised by sight as being in very good shape. Structural damage was restricted mostly to near surface areas and did not occur in deep profiles.

Locally limited sandy areas could only be identified during cleaning, since they were covered with a thick surface accumulation. Soiling of the stone surface results from dry deposits, but damaging reactions are only caused when these deposits are connected to condensed moisture. Furthermore, a large portion of the damaging substances dissolve in high humidity i.e. fog. Up to 100 times accumulation of air pollutants is found in dew, rime or foggy rain, as opposed to the concentration in rainwater.

The condensed moisture, which is the most prevalent on the object, does not rinse like rain, but leads rather to an alternating moistening and drying of the accumulation, which then develops a withstanding reactive dynamic. The existing soiling and incrustation on the colossi, made up mostly of plaster and natrium chloride, gain their solidity in this manner.

The pores of the stone are closed by the soiling and incrustation which, as the measurements from Dr. KARSTEN show, do not seem to have a detrimental effect. The same is not true for areas, from which the primary quartz grains were not properly sealed or where damage due to various other factors existed. The accumulation consists, therefore, of a compression of particles with a damaging character, since a moisture diffusion resistance is present. In addition, the congestion and dissolving continues underneath. The damage stemming from such physical influences on buildings, loosen the material structure and are characterised mostly by the pictures of damaging flaking and crumbling. The main process is most likely to be the salt reactions and this can be traced back to volume enlargement, which occurs due to hydration and dehydration.

During the cleaning process red ochre and blue colour remnants of the original polychrome surface of the Colossi were uncovered bit-by-bit and documented in drawings for further investigation. When these colours are preserved in layers it is relatively easy to differentiate them. However, it is difficult to determine them if only colour traces are available as the ochre and red pigments have the same appearance and probably the same chemical composition as the iron oxide on the stone. On the northern Colossus, only the smallest remnants have been preserved in the pores, whereas the polychrome surface on the southern Colossus is in a better state of preservation. In order not to damage these remnants, the relevant areas were only softly cleaned, so that a light patina layer was preserved on top of the surface.

J.L.

4. Geological Investigation

4.1 Situation

The site is located on the western bank less than 1 km from the Nile River. It is surrounded by cultivated fields, and is delimited by a road and the first slope of the western mountains. The area has a typical desert climate and it has scarcely rained there for several years, due to the Nasser lake water evaporation above the dam.

The area has suffered many fires due to agricultural practices. In 1998, the site of Kom el-Hettân, with the temple of Amenhotep III, was introduced into the list of the hundred most endangered monuments of the world by the World Monuments Watch program.

Since 1998, the site has been under study by an archaeological mission, which carries out the excavation and restoration work. This excavation work, although only partially completed (parts of the site have still to be investigated), has already led to the discovery of many interesting and exceptional monuments.

4.2 Main Analytical Techniques

Geological observations were carried out in the field – using the naked eye and with lens (x15). The southern and northern faces of the southern Memnon Colossus were examined from a temporary small scaffold, 4 to 6 metres in height.

Quantification of some ions (chloride, sulphate, nitrate) of the available waters for cleaning or desalting purposes was conducted with a kit of reactants from the mission.

KH (Kom el-Hettân) are samples analysed on the site.

X-ray diffraction (XRD) was used to determine the mineralogical composition of samples (Bruker D8 Advance diffractometer, Bragg-Brentano system), copper anticathode 1.54 m, on ground powders, from 5 to 65° Θ/2Θ at an acquisition rate of 0.02°/sec. phases research on computer using a JCPDS software, section 1 to 43.

Microscopic examinations were undertaken with a scanning electronic microscope (low vacuum SEM JEOL LV 5600) fitted with an EDS microprobe OXFORD to make qualitative and semi-quantitative elementary analyses (INCA software).

4.3 State of Conservation of the Memnon Colossi

The famous Memnon Colossi are cut in monolithic blocks of a sedimentary quartzite, red to brown in colour and more or less indurated and coarse grained (sand to pebble aggregates), according to the area where it was quarried. Roman restoration is visible in the upper part of the North Colossus, which was rebuilt with cut stones (sandstone). The Colossi were cleaned last year by restorers, who decided not to clean the parts which were too fragile. These surfaces will be cleaned by finer methods in the next intervention (micro sandblasting with local pre-consolidation).

Possible painting layers or ancient treatments were observed in a few places on the statues and all around the base from temporary scaffolding. In small areas, yellow to red paintings can be recognised (on the queens). White coverings are more numerous but their identification as white painting is not obvious. Some of the visible deposits could correspond to whitish falcon droppings or other kinds of material, rather than to painting remains. A light whitish veil was also observed by the restorers. A few tiny samples were collected.

The bases present several coloured levels more or less horizontal. Some of them can be clearly identified, e.g. the fire marks due to agricultural activities, whereas others could have different origins. The historical reconstitution is difficult due to the alternative deposition and abrasion phases that could have occurred as a result of painting campaigns, wind, flooding water, silt deposition and salt crystallisations, previous cleaning campaigns, birds, agricultural practices or fire. Today, the appearance of both Colossi may reflect many cycles of deposition and abrasion/removal actions.

4.4 Soil Remains

KH 2: The whitish product remaining in a few tiny parts is made up of gypsum crystallisations showing pure and clear crystallised shapes. It might be a deposit of gypsum (plaster) on the surface of the sculpture.

4.5 The Whitish Veil

A whitish veil is visible on the surface of the quartzite. KH 3 is a quartzite scale covered by a thin white veil and was examined by the SEM. The elementary composition comprises a mixture of *Si, Al, Mg, Fe* and *Ca* with minor amounts of *S* and *P*. The iron content varies from place to place. Where the veil was most consistent, *S* and *Ca* rates increased together, indicating the gypsum composition of this veil. *K* appears probably linked to *Ca* in a soluble salt formation: syngenite ($K_2Ca\ (SO_4)_2$). The surface looks very compact but with increased magnification, it consists of small crystallisations and particles. Secondary quartz emerges through this irregular layer at the surface of the stone.

4.6 The Different Levels Visible on the Bases

Several coloured levels are visible on the bases. They clearly correspond to different events: Nile floods and alluvial deposition, ground level and earth deposits, fires with black soiling and rising damp with a whitish efflorescence. The bases were not cleaned except for the test areas, because the different deposits and apparent levels are considered to be testimonies of the history of the site. They are of enough value to be investigated before destruction. Their removal is not absolutely necessary unless they are a source of soluble salts. Few samples from the basement were analysed but they were not numerous enough to build the complete stratification present in these bases.

4.7 The Clear Brownish Deposits

A clear brownish deposit was observed in many parts of the Colossus as well as on the epidermis of other sculptures within the site. Two questions arise from this product: what is its composition, nature and origin? Does it harm the stone or could it be considered to be simple neutral deposit? Samples were collected in different places for investigations.

4.8 KH 6: The clear brownish layer is a coating of 200 µm thick. The quartz grains have not been completely recovered. Some depressions are filled by a kind of coating whereas the reliefs are uncovered. The layer has clear properties of a deposit above the quartzite. This deposit contains *Si, Al, Mg* and *Fe* on one hand and *S, Ca* and *K* on the other hand. At higher magnification it can be seen that various small particles build the layer. Some of them are gypsum crystallisations while others may be detritic eolian particles (quartz grains).

4.9 KH 7: The clear brownish layer was analysed by different techniques. With the help of XRD, calcite was identified as the main compound and gypsum as a minor phase in the sample. An effervescence test in diluted acetic acid was positive: the calcium carbonate was attacked and CO_2 bubbles were formed and escaped from the sample, which was completely destroyed.

SEM observations of the surface of this layer showed calcite ($CaCO_3$) crystallisations and a magnesium ferrous silicoaluminate with very low-to-low rate of phosphor, sulphur, titanium etc.

4.10 Salt Efflorescence and Other White Products

The white efflorescence visible on the front side of the base of the southern Colossus was collected by the means of an adhesive band with the reference sample KH 4. The band was examined with SEM. Several crystallisation shapes were observed. Analysis of the microprobe made it possible to identify the following salts: magnesium sulphate, sodium sulphate and a double calcium and potassium sulphate. Unfortunately, XRD analysis (in order to identify the salt phases) was impossible due to the small amount of material. Nevertheless, the chemical compositions obtained by microanalysis suggest that the efflorescence consists of a mixture of magnesium such as magnesite $MgSO_4$ or epsomite $MgSO_4$, $7H_2O$ or hexahydrite $MgSO_4$, $6H_2O$ and sodium (mirabilite Na_2SO_4, $10H_2O$ or thenardite Na_2SO_4) sulphates and syngenite $K_2Ca\,(SO_4)_2$.

Another whitish product KH 9 was collected in a cartridge on the southern face of the southern Colossus. But unfortunately, the composition of this small scale, dominated by organic material and needles of phosphor and calcium (probably connected in an apatite phase), leads us to think that it corresponds rather to recent pigeon or bat droppings. It has been reported that the soiling had been removed during previous cleaning and maintenance campaigns.

The break of a small part of stone KH 8 covered with a clear brownish layer was examined so as to investigate the stratification of the stone, in order to attest the presence or absence of a white layer just beneath the clear brownish layer. A mixture of silicate and calcium carbonate, with traces of chlorides and sulphates was evident in the inter-granular porous network of the stone. These last elements indicate the presence of a certain amount of soluble salts within the stone. The quartzite cementation is poor whereas the secondary quartzification around the siliceous grains is effective. The inter-granular cement doesn't show any crystallised shape. The clear brownish layer is 200 to 400 µm thick and can be divided into 2 layers: an upper porous product and a base compact layer. The elementary compositions of the 2 layers are different. The compact lower layer is rich in calcium, probably in the calcium carbonate phase, calcite. This layer also contains *Si*, *Al*, *Mg*, *Fe* and *P*, *Na*, *K* and *S* as minor elements. In the upper porous layer, the *S* content increases and gypsum, the calcium sulphate, probably takes place. Chloride content increases also indicating the crystallisation of sodium chlorides (halite, $NaCl$).

A fracture had been refilled with a white product and quartzite rubble on the north-western corner. The white product is made up of bassanite, which is calcium hemihydrate sulphate. This phase is an indicator of a plaster material and could suggest an antique or ancient use of gypsum plaster.

Ph.B.

III. The North Colossus of the Second Pylon

The northern quartzite colossal statue of Amenhotep III, which had fallen across the passage at the Second Pylon, had been partially exposed for documentation during the previous season, and covered again with sand. We temporarily uncovered the colossus again from 21 December 2002 to 25 January 2003, for precise measurement, mapping, and drawing, as well as for the planning of a long-range conservation and presentation project.

The colossus had fallen on its right flank in an east-south-easterly direction and lies now across the axial passage in squares 700 S1, S2, N1, N2 and 710 S1, S2, N1, N2. We uncovered the torso as far as the ground level at the back, 2.10 m from the ground level. Immediate conservation was implemented on the very damaged parts, and markers fixed at several points on the cracks. At the same time, a documentation of the remains was carried out by Anna Hofmann and the architectural mapping and drawings to scale were made by Stéphane Rousseau.

During the winter season 2002, I had mainly the head and the front side of the lying colossus uncovered for documentation. I also had two sondages made, one below the right foot of the royal colossus, and the second approximately below the level of the knee of the king, in order to see if, similar to the Colossi of Memnon, a statue of a queen was flanking the leg of the royal colossus, which we had supported with large wooden beams. The two sondages had indeed been successful with the discovery of the head and the legs of a queen, wearing a wide wig with frontal uraeus and a long tight fitting dress[13]. In winter 2002/2003, after increasing the wooden supports under the leg, verifying the stability of the broken parts and checking the fixation of the markers on the cracks, I cleared the entire zone under the royal leg, with the involvement of one young workman, Ali Younes, who literally crept under the colossal leg to clear out the millennium silt. The complete figure of the queen appeared, standing near the right leg of the royal colossus (Tf. 26b, c). The inscription engraved on the throne jamb under her right hand revealed her name and title: "The Great Royal Consort, his beloved, Tiye, given life". The queen is intact. She stands on a low rectangular base. From the top of her modius, which probably holds a high diadem, to the statue's base, she measures 2.65 m. In her left hand she holds the floral whisk of the queens against her breast; in her right hand she holds a papyrus the umbel of which is broken – that is the only damaged part of the statue which is otherwise completely conserved. The queen was wearing a long, wide wig, which is encircled by a floral diadem, and adorned by a uraeus at the front. Her tight fitting long dress reaches down to her ankles. A broad collar covers her chest, and large bracelets adorn her wrist. The face of the queen is round, with a serene expression rendered through marvelously sculptured and harmonious features resembling those of the king himself: narrow and elongated eyes surmounted by long curvilinear eyebrows rendered in bas relief; a short nose with wide base, a large mouth with bulging lips; and a short chin. An extremely elegant modeling enhances her round and projecting breasts in contrast to her fine and elongated waist. Her long legs appear finely underneath her long dress, which is subtly suggested.

During the previous season, we recovered several sculptured, decorated and inscribed fragments from former refills in front of the colossus and we had these recorded and stored. This season I enlarged the clearance at the back and at temple ground level, we uncovered several blocks behind the colossus, which derive from the sides and the back of the statue's base. These blocks bear parts of the decoration representing northern foes on the left half of the base (north), and southerners on the right (south) half. After cleaning and immediate conservation measures, we made groupings and trial assemblages of these blocks. From these groupings we could obtain clearer dimensions of the statue base. It measures 1.45 m high, or nearly 3 cubits; the length is 6.63 m, which correspond to ca. 13 cubits, while the width is 3.60 m or 7 cubits.

Six large blocks joining each other (inv. no. 1212, 973, 1211, 974, 1215, 1213) form the back of the base (Tf. 28a). The decoration is very damaged and barely conserved. It consists of the *sema-tawy* symbol in the axis, with the papyrus on the left side (north) and the water lilies on the right (south), flanked by bound foes, four northern ones on the left facing north, and four southern ones on the right, facing south. The schema is repeated on the face of the base which is also decorated, as we had seen during the previous season, with an axial *sema-tawy* flanked by representations of foes facing each other, from whom only two southern ones are up to now uncovered. Thus the two lists of foes that end at the back of the base begin there.

One block bearing inv. no. 1212 forms the rear left corner of the base. It measures 1.14 m high, 0.84 m wide and 0.95 m deep. On its left side, it bears the back part of an Asiatic foe and a better conserved representation of a bold captive with pointed beard, identified as *mntj.w st* by the inscription in the cartouche (Tf. 27b). This captive is the last in the line, which ends on the left side of the base with a bunch of papyrus. In the line inscription engraved in the upper register, we can observe the ending of the royal titulary with the throne name of the king who is given life. As this is the only foe discovered as yet, from the left side of the base, we ignore the number of the foreign lands represented on the sides, as we can only find this out when we are eventually able to uncover and reveal the right side of the base, now completely submerged. However, from the bottom of the excavation we raised two blocks detached from the right side, which join the right rear corner of the base (inv. no. 114 and 1278) and show a southern foe followed by water lilies and surmounted by the line of inscription with the titulary of the king (Tf. 27c). The uppermost block (inv. no. 1214) comprises the lower rear corner of the throne and bears the back foot of one of the Nile gods who were represented on the sides of the throne.

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[13] Second report, in: *MDAIK* 59, 2003, p. 435, pl. 74b, c.

Behind the colossus itself, during the clearance of the soil around the back of the throne, we got a glimpse, on the right flank of the monument, of a finely carved scene in relief symbolizing the unification of the two lands by two Nile deities. We raised up a block belonging to the upper part of the right side of the throne (inv. no. 1279), bearing a part of the wig of the rear Nile deity crowned by the emblem of water lilies and surmounted by an inscription containing the name of "Amun-Re, [king] of god[s]".

During the last phase of the work, smaller pieces from the base of the north colossus were joined together by the conservation team, and an emergency conservation was addressed to the very decayed blocks, such as the corner stone (inv. no. 1215) of the base, on which pieces which had become detached from the inscribed part were fixed.

Parallel to this, geo-electric soundings were carried out to the east of the lying colossus and to the south and southwest of the south colossus of the Second Pylon. A certain resistivity was recorded at the southeast of the latter. To the west of the colossi, on both sides of the axis in squares 710 N1 and S1, and 720 N1 and S1 respectively, the resistivity survey revealed two rectangular forms which probably mark the position of the socles on which the colossi of the Second Pylon were placed. Two dark forms, detected in the northern squares 710 N1 and 720 N1, were verified by M. MOOSAUER, from drillings which had met with resistivity at a depth of 2 m to 2.75 m below actual ground level, showing probably the position of a part of the northern colossus and that of the socle.

While being mapped, drawn, photographed, and measured, the state of conservation of the colossus was recorded. Its parts were studied by stone conservators in preparation for its reassemblage and its eventual elevation and presentation. At the end of the season, we covered the colossus again, first with the earth from the excavation proper, and then with pure sand. We kept the large blocks forming the base of the colossus in a mud brick enclosure together with all undecorated fragments and quartzite splinters. This enclosure was then filled with sand, while all decorated smaller fragments recovered around the colossus were documented and stored. Larger parts from the headdress and the torso recovered during the previous season are now conserved on a brick mastaba behind the torso of the colossus.

This colossus and its companion piece, which were once placed on both sides of the passage leading to the gate of the Second Pylon, are of the same material and same type as the Memnon Colossi at the First Pylon. They represent the king enthroned and accompanied by smaller statues of queens standing against the jambs of the throne, which was decorated by Nile deities symbolizing the *sema-tawy*. The major difference lies in the costume. At the First Pylon the king wears a short pleated kilt, which exceptionally bears on his lap a leopard head sculpted in high relief. At the Second Pylon, the king's kilt is equipped with an obliquely pleated triangular sporran, which is terminated at the lower corner by a uraeus bearing the sun disc. These features are exceptional on royal colossi of all periods. The triangular kilt on seated statues is rarely observed[14] and the uraeus with sun disc appears on the royal kilt for the first time in the 18th Dynasty[15], and coincides with the change in the official royal attire both in statuary and in two-dimensional representations[16]. The second difference from the colossi at the First Pylon is, that the latter are monolithic and are placed on pedestals made of three large blocks, whereas the colossus of the Second Pylon is sculptured together with its base from one monolithic block, which was probably placed on a larger high socle or pedestal. The decoration of the base, when reassembled, will reveal an additional list to the known lists of foes represented under the feet of the king.

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[14] For (the only?) example, see the seated statue of Neferefre from Abusir: M. VERNER, in: *BIFAO* 85, 1985, pp. 272–273, pls. 45–48.

This innovation in the iconography of the royal colossi at the Second Pylon is probably the manifestation of the official royal image after the celebration of the first jubilee, when the king is identified with the sun[17].

H.S.

IV. Clearance and Conservation Work in the Peristyle Court

1. Relevés de la rampe d'accès et du portique oriental de la cour péristyle

(Mapping of north half of the Peristyle Court [PEN] and the passage leading to East Portico).

Lors de la campagne 2002–2003 sur le site du temple d'Aménophis III à Kom el-Hettân, nous avons relevé dans la Cour Péristyle la zone de la rampe d'accès et les parties dégagées de la moitié nord du portique oriental.

Tous les relevés topographiques ont été réalisés au 1/50ème. Sur le terrain nous avons calé nos dessins au nouvel axe topographique (orienté à 295° par rapport au Nord) et au carroyage de 10/10 m qu'il propose. Nous avons pris le parti de relever tous les blocs visibles dans le détail. Parfois la remontée des eaux nous a empêchés de relever entièrement certains éléments de fondation. Leurs limites ont tout de même été dessinées afin de les situer sur la carte. Lorsqu'une coupe ou un relevé de face de certains éléments architecturaux étaient nécessaires pour leur meilleure compréhension, nous les avons effectués.

Ces plans et relevés ont ensuite été scannés et vectorisés sur ordinateur à l'aide du logiciel Adobe Illustrator. Ce qui nous permettra, par la suite, de produire ces plans à différentes échelles et sur différents supports.

Le récent dégagement de la moitié nord du portique est et du passage axial, a encore une fois mis à jour les éléments architecturaux encore conservés de la rampe d'accès menant à la cour péristyle. Les vestiges de certaines bases des colonnes ont aussi été redécouverts. Leur état de conservation n'est pas homogène. Certains éléments sont parfaitement conservés tandis que d'autres sont complètement dissous par l'eau et les sels, comme c'est le cas pour certaines bases de colonnes. Par ailleurs, l'érosion ne semble pas avoir altéré les blocs du dallage de manière uniforme. En effet, une érosion différentielle semble avoir endommagé inégalement les grès suivant leur qualité. Certains blocs ont donc conservé leur surface rectiligne, tandis que d'autres présentent une érosion plus poussée qui a délité, fissuré ou

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[15] Thutmosis IV on a wall relief of his 'Festival Court' at Karnak, to be published by F. Larché and B. Letellier; see *Karnak* X, p. XVII, pl. XXVIII.

[16] For bas reliefs see R. Johnson, in: L.M. Berman (ed.), *Art of Amenhotep III*, Cleveland 1990, pp. 26–46; for statuary: H. Sourouzian, *Hommages Leclant, BdE* 106/1, 1994, pp. 499–530.

[17] Beyond the deification of the king, this phenomenon specially expresses the assimilation of the Egyptian king with the solar god. On this, see H. Sourouzian, *The solarisation of the Egyptian King*, in: *Festschrift* A. Radwan, in press.

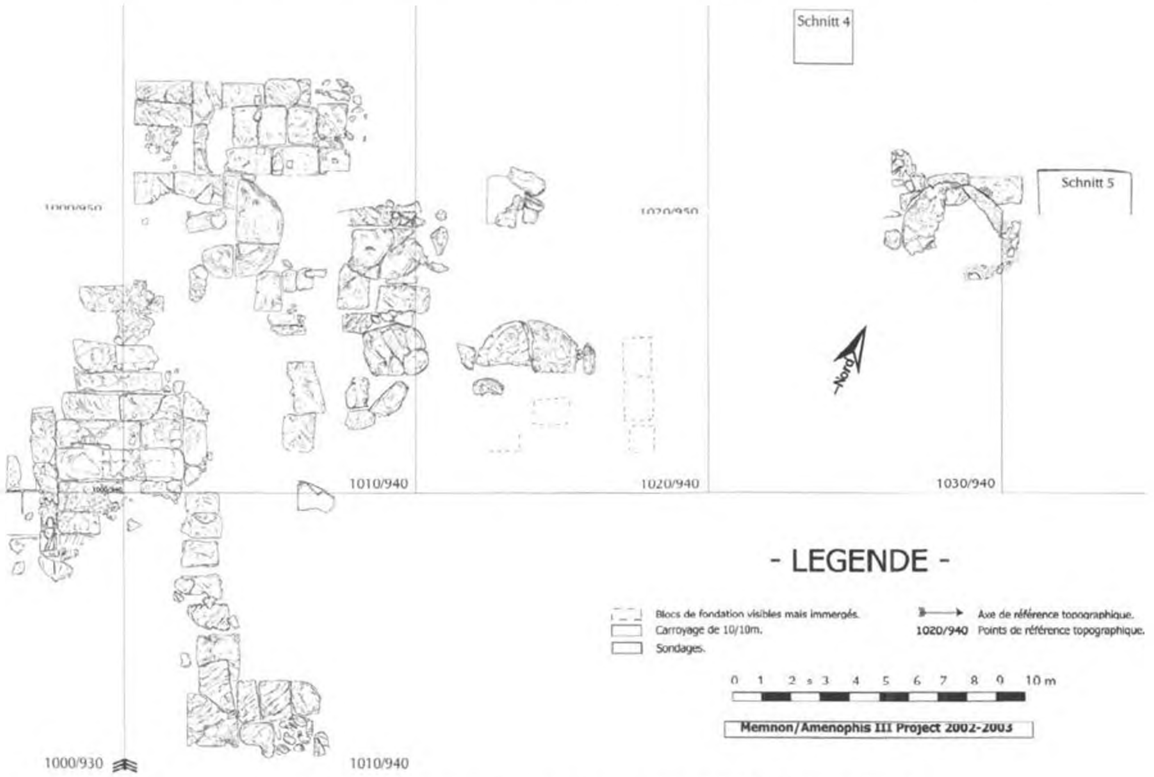
Schnitt 4
Schnitt 5
1000/950
1020/950
1010/940
1020/940
1030/940
1000/930
1010/940
Nord
- LEGENDE -
Blocs de fondation visibles mais immergés.
Carroyage de 10/10m.
Sondages.
Axe de référence topographique.
1020/940 Points de référence topographique.
0 1 2 3 4 5 6 7 8 9 10 m
Memnon/Amenophis III Project 2002-2003

Fig. 3 Relevé de la rampe d'accès et du portique oriental de la cour péristyle

désagrégé la surface des éléments architecturaux. L'absence de certains blocs de pavement montre clairement une récupération de ceux-ci comme matériel de construction à des époques postérieures.

Très peu de matériel archéologique a pu être découvert dans ce secteur, mis à part quelques tessons et quelques fragments statuaires ou blocs inscrits. En effet, la majorité de ce secteur avait déjà été fouillé puis remblayé. Il convient de signaler la découverte de quelques fragments en granite appartenant peut-être à une statue de Sekhmet, lors de la fouille de l'assemblage architectural communément nommé « porte ». Un autre fragment de granite a été aperçu mais n'a pu être dégagé car il était situé sous la base de colonne la plus au nord du secteur, qui était complètement inondée. D'autres fragments, de quartzite ont aussi été découverts dans le secteur de la stèle effondrée.

1.1 Vestiges de dallage (Fig. 3). De nombreuses pierres du dallage encore en place ont été dégagées. Celles-ci, en grès, sont de taille variable. La largeur de ces blocs varie entre 40 et 75 cm, tandis que leur longueur varie entre 85 et 140 cm. Trois blocs particuliers sont à signaler: ils portent des cavités creusées sur leur lit d'attente. Ces éléments pourraient être des cavités de levier ayant servi à mettre en place un bloc superposé, de taille importante tel que la stèle nord. La proximité d'une des bases de colonnes pourrait aussi expliquer la présence de ces cavités rectangulaires. Par ailleurs, certains des blocs de dallage, situés autour des bases de colonnes, sont taillés de manière à épouser la forme convexe de celles-ci.

L'observation des relevés de nivellement effectués sur le dallage montre une certaine homogénéité des mesures lorsque l'on sépare celles prises à l'Est et celles de l'Ouest. Ainsi les niveaux altimétriques

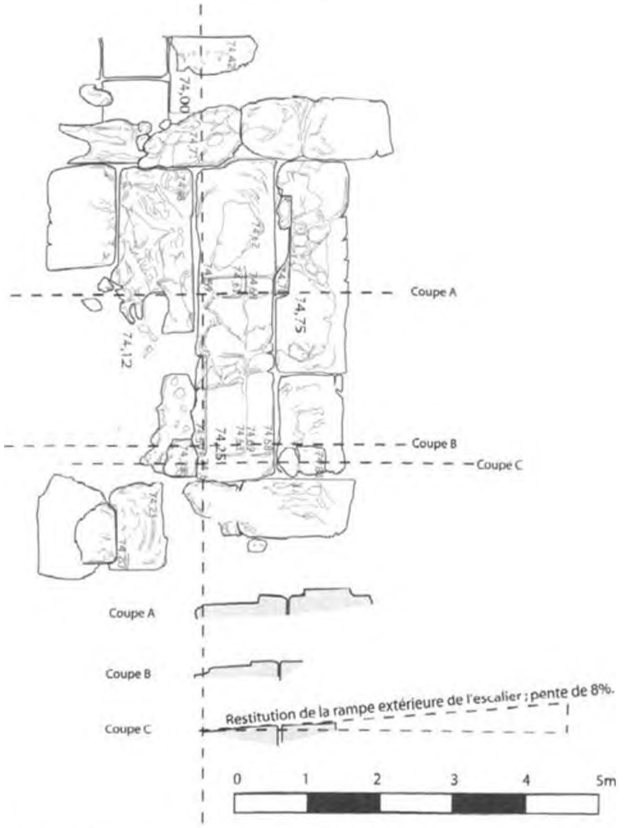
74,42
74,00
74,77
74,75
74,12
74,251
Coupe A
Coupe B
Coupe C
Restitution de la rampe extérieure de l'escalier ; pente de 8%.
0
1
2
3
4
5m

Fig. 4 Rampe menant au portique oriental de la cour péristyle

varient de 74,29 à 74,53 m à l'Est et de 74,55 à 74,78 m à l'Ouest. Ces mesures sont intéressantes car elles confirment que l'Est peut être considéré comme le bas de la rampe et l'Ouest comme le haut.

1.2 La rampe (Fig. 4, Tf. 28e). Elle est constituée de deux escaliers parallèles séparés par une rampe médiane et elle est entourée de part et d'autre par une rampe extérieure. Les vestiges encore conservés de la rampe extérieure nord permettent d'en restituer une pente de 8%. Deux marches de chaque escalier qui constitue l'ensemble de la rampe sont encore discernables, bien que très endommagées. La hauteur conservée des marches varie entre 5 et 8 cm, leur largeur est comprise entre 138 et 140 cm, tandis que leur longueur oscille entre 55 et 65 cm.

L'axe médian de la rampe est décalé de moins de 10 cm au sud par rapport au nouvel axe de référence topographique. Comme nous l'avons déjà remarqué lorsque nous traitions du dallage de ce secteur, la pente de ce niveau de sol est plus ou moins conservée.

1.3 La « porte » (Fig. 3). Cet assemblage de blocs de taille plus importante est communément appelé « porte ». En effet, il pourrait s'agir de la première assise du pied droit nord de la porte de l'enceinte du temple. Cet ensemble architectural présente un ressaut pouvant recevoir un battant de porte monumentale. La hauteur d'assise de cet aménagement, de plus de 70 cm, beaucoup plus importante que les autres éléments architecturaux, confirme sa particularité. Sous cet aménagement, nous avons pu observer la présence de blocs de fondation. La poursuite du dégagement des fondations de cet ensemble pourrait nous fournir d'autres éléments pour une étude plus approfondie de son mode d'aménagement.

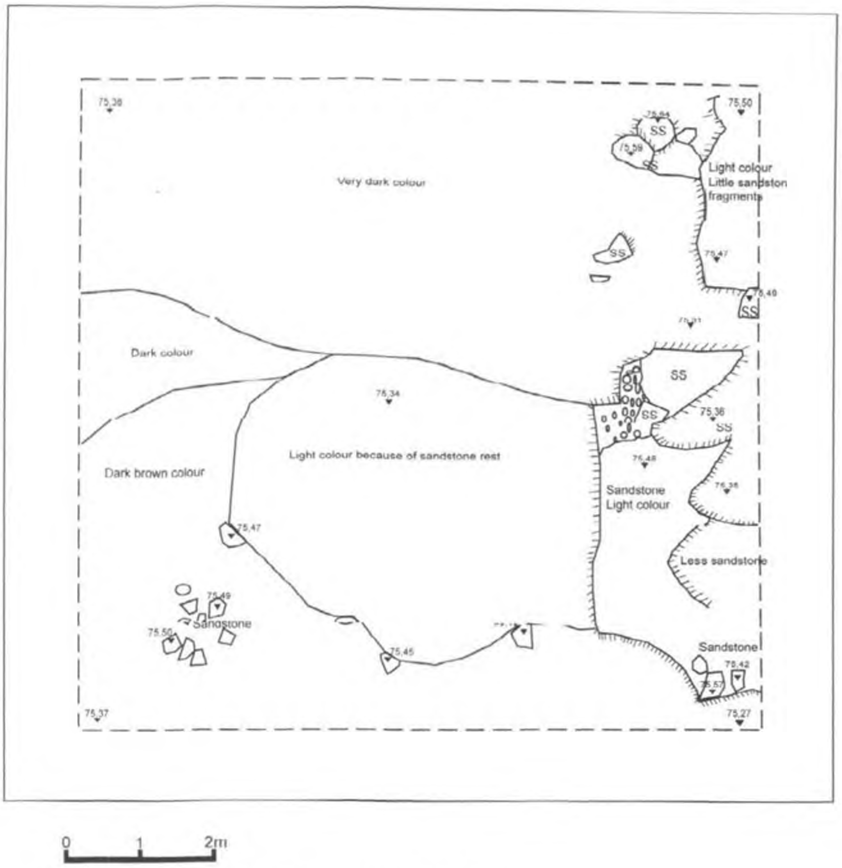

Fig. 5 Square 990 South 1, layer 5

Les mesures altimétriques relevées sur cet ensemble confirme leur hauteur d'assise plus important, avec un nivellement variant de 74,92 à 75,40 m. Les blocs de fondation de cet aménagement quant à eux sont à une altimétrie de 74,19 m.

1.4 Les blocs de fondation (Fig. 3). Certains blocs de fondation ont été dégagés afin de compléter le relevé. Il semblerait qu'il n'y ait qu'une seule assise de fondation sous l'assise du dallage visible aujourd'hui. Il en est de même pour la mise en œuvre des bases de colonne. Un dégagement plus vaste, voire exhaustif, de ces blocs de fondation devrait nous permettre de mieux comprendre les modes d'assemblage mis en œuvre pour la construction de ce temple. En effet, les fondations sont généralement dépendantes des assises supérieures, elles seront plus importantes sous des éléments monumentaux tels que les colonnes, les stèles ou les portes par exemple. Ainsi, la reconnaissance d'aménagements particuliers de blocs de fondation nous permettrait d'une part de comprendre les aménagements qu'il recevait et d'autre part de les restituer.

On note des variations de l'altimétrie des niveaux de fondation entre le dallage, la rampe, les colonnes et la « porte ». Les lits d'attente des éléments de fondation semblent culminer à 74,02 m pour le secteur de la rampe, ils se situent à 74,19 m sous les éléments architecturaux de la « porte », tandis qu'ils varient de 74,25 à 74,32 m sous les bases de colonne du péristyle nord. Une variation aussi régu-

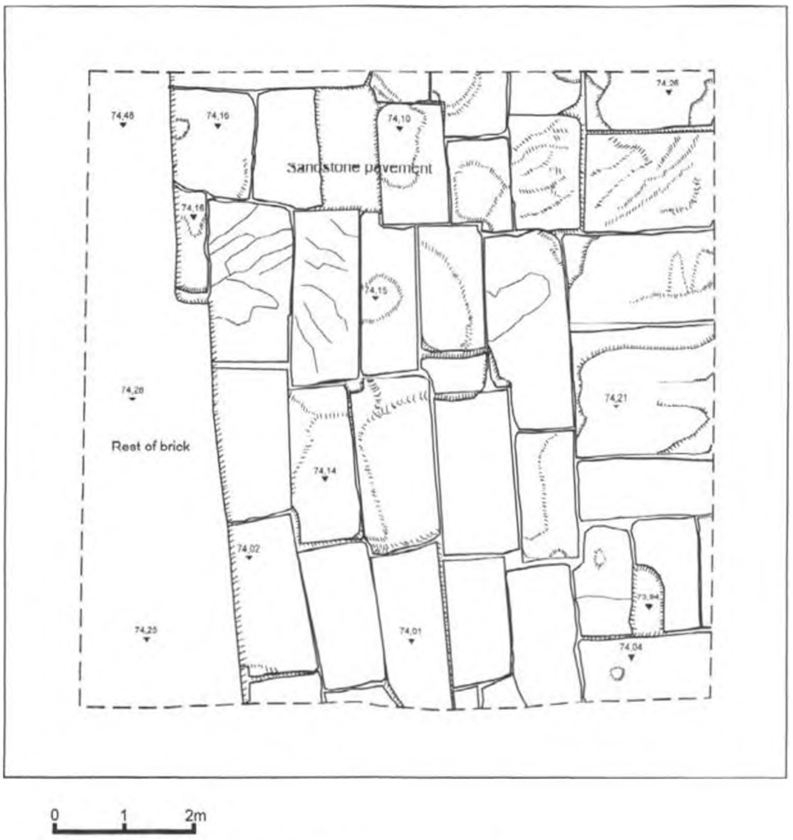

Fig. 6 Square 990 South 1, layer 7

lière ne peut provenir de facteurs postérieurs à la construction du temple, elle ne peut être qu'intrinsèque à celle-ci. En effet, il est évident que le temple a pu subir de nombreux « accidents » ayant pu modifier de manière hétérogène son altimétrie[18].

1.5 Les bases de colonne. La fouille menée lors de cette campagne 2002–2003 a mis au jour six bases de colonne dans la moitié nord du portique oriental. Elles présentent un rayon moyen de 1,75 m sur leur lit d'attente. Dans des états de conservation variables, elles nous livrent certains détails de mise en œuvre. Celles qui sont les plus détériorées se présentent sous la forme de sol induré et compact qui a gardé la forme arrondie de la colonne. Parfois, seuls quelques fragments très érodés des blocs qui la constituaient nous sont parvenus. Dans le meilleur des cas, la base de la colonne est encore présente et se constitue de plusieurs blocs de grès soigneusement taillés et agencés. Malheureusement, aucune de ces bases de colonne n'est complète. Elles nous permettent tout de même de remarquer certains détails de leur mise en œuvre. Il semblerait que ces bases de colonne soient constituées de quarts de base de colonne. La taille et le nombre de ces quarts ne semblent pas être réguliers, même si au moins un joint

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[18] Ces « accidents » peuvent être des séismes, des glissements de terrain ou encore la variation hétérogène de la stabilité du sol, dus aux périodes d'inondations et de sécheresses successives.

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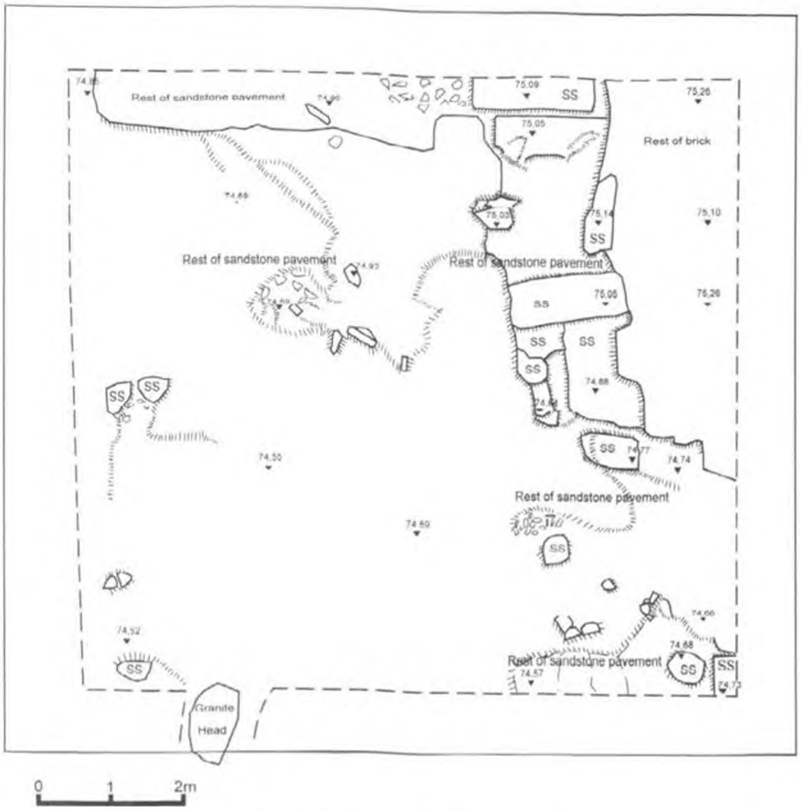

Fig. 7 Square 990 South 2, layer 7

de cet assemblage semble diviser la base de colonne en deux demi-bases de taille égale. L'étude plus approfondie des fragments de base de colonne que l'on a pu observer autour de ces bases encore en place permettra certainement de remonter certaines d'entre elles. Les relevés de nivellement des lits d'attente de ces bases de colonne montrent que ceux-ci varient de 74,92 à 75,4 m.

1.6 Sondages. Deux sondages, Schnitt 3 et 4, ont été réalisés dans le dessein de découvrir un hippopotame en albâtre aperçu en 1970.

1.6.1 Schnitt 3. Ce sondage a été réalisé à proximité des vestiges de la base de colonne conservée la plus au nord de la zone fouillée du péristyle. La découverte de fragments d'albâtre parfois réduits à l'état de poudre a provoqué la nécessité de sonder ce secteur afin de comprendre d'où ils provenaient. Cette couche stratigraphique d'aspect poudreux et blanc a une dizaine de centimètres d'épaisseur et est inclinée. Aucun de ces fragments n'a montré, jusqu'à présent, une forme reconnaissable de statuaire.

1.6.2 Schnitt 4. Ce second sondage a été réalisé à la suite de prospections géomagnétiques qui indiquaient la présence d'une anomalie. Le sondage était donc positif et nous a permis de découvrir des fragments de grès, à une altitude de 74,33 m, appartenant certainement à un niveau de sol du temple. La remontée des eaux d'irrigation jusqu'à ce secteur nous a empêché d'élargir le sondage et de déterminer la nature de ces blocs désagrégés en surface. L'examen du sol sera repris pendant la prochaine campagne.

M.E-A.

2. Clearance in the Open Court and the South Portico

From the beginning of our season in November 2002, we continued the clearance of the southern part of the Peristyle Court, with three new squares in the southwestern part of the open court: 990 S1 (former PHS 4), 990 S2 (PHS 5) and 990 S3 (PHS 6). These squares measure 10 m x 10 m, with a baulk 1 m in width between them. Each layer measures 10 cm deep.

At the beginning of the excavation, in the first layer, we found in 990 S1 (PHS 4) a big agglomeration of sandstone fragments, most of them without decoration, as well as pottery and black granite fragments, which we registered. The material consists of mixed rubble from former excavations and was not found *in situ*.

The second layer revealed fragments belonging to at least three sandstone statues. Two fragments of royal heads with part of the *nemes* and the ear (Tf. 29e, f), the lower part of a head with the lips and chin belonging to a larger royal statue, as well as pieces of a royal beard (Tf. 29c, d). From the third to the fifth layer we observed a big concentration of sandstone in the northern part of the square. Some of these fragments were inscribed. We differentiated between two structures, 1 and 2. This area seemed to contain the remains of a deposit produced by earlier excavations (see Fig. 5). In the sixth layer we continued to dismantle both structures and encountered the remains of a brick structure in the south of the square.

In the seventh layer the beautiful original pavement of the temple in sandstone appeared, very well preserved (Tf. 29b). The pavement rises softly from east to west, due not only to the original inclination of the floor level in the temple, but also due to the movement of the ground. We measured a variation between 10 cm and 22 cm. At the same time, the pavement slopes down from north to the south of the square. We observed a variation of 7 cm to 10 cm, which can be explained, in this case, by the bad condition of the foundation and the high water level.

Simultaneously, we cleared the square 990 S2 (PHS 5), also in seven layers of 10 cm each. The first four layers consisted of a mixed material with a large quantity of sandstone fragments. In the fifth layer we recovered an agglomeration of sandstone fragments in the middle of the square, most of them undecorated. This seems either to belong to a destruction phase or to the remains of an older excavation depot. From this fifth layer on we observed traces of a brick structure in the northwestern part of the square. This structure became more evident in the sixth layer.

In the seventh layer the original pavement of the temple appeared, like in the square 990 S1, but in this case very damaged. We only have some remains in the northern and western parts of the square. The sandstone has been completely eaten by the salt and in most of the places we only have a very thin layer of sandstone belonging to the foundation of the original pavement (Fig. 7).

The profiles in this square, as well as those of square PHS 4, show that this area was excavated, the material is mixed and there isn't any stratification (Fig. 8). In the extreme south of the west profile we observed a big fragment in red granite. We opened a trench in the baulk and were gratified by a beautiful royal head of a colossal statue (Fig. 7). The face was turned downwards. When we turned it round, we discovered a beautiful head of Amenhotep III with a half damaged face (Tf. 30a).

The work in square 990 S3 (PHS 6) revealed a very interesting soil, which coincides with part of the South Portico of the Peristyle Court. We found a great quantity of fragments belonging to a colossal statue in red granite. In the first and second layers the material was very mixed. But from the third layer on, the number of red granite fragments increased considerably. The fifth layer revealed, in the southern limit of the square, the feet of a royal statue resting on a rectangular base, which was decorated with representations of Nubian captives and place names (Tf. 30b). Finally, in the middle of the square a big fragment of the royal torso appeared, which had been badly quarried and was very damaged (Fig. 9).

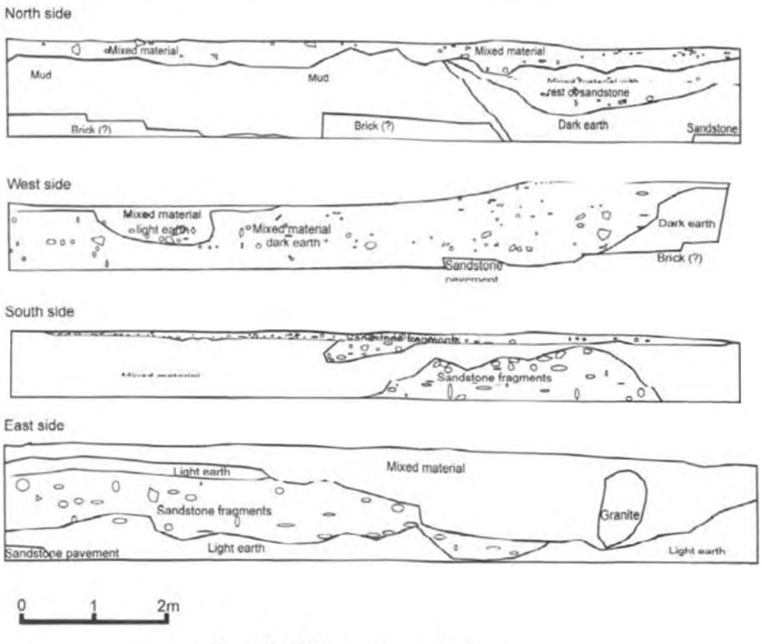

Fig. 8 Profiles square 990 South 2

In this area the original sandstone pavement is missing. Only some remains were found in the eighth layer. The level of the floor is slightly lower than that of the precedent squares. For this reason the high level of the water has destroyed most of the stone slabs.

In the southern part of the Peristyle Court, we started the clearance of two new squares: 980 S2 (PHS 8) and 980 S3 (PHS 9), but only two layers were cleared. The material was very mixed and revealed many pottery shards in both layers. In 980 S2, like in squares 990 S1 and S2, a great quantity of undecorated sandstone fragments appeared, which seems to be a deposit from earlier excavations. In the second layer of 980 S3, quarried red granite fragments started to abound. A very large piece measuring 2.45 m long and 0.55 m wide is part of the torso with a shoulder of a red granite royal statue facing downwards, its spine completely quarried. This torso was covered again with sand. We will continue the excavation in this part of the Peristyle next year.

In the northeastern part of the Peristyle Court, we made four sondages following the indication given by the electromagnetic and radar surveys. The first sondage (PEN Schnitt 1) is situated in squares 960 and 950 N4 and N5. Here we opened a trench of 12 m x 12 m, which we excavated in 6 layers (Fig. 1). The first layer contained very dark earth and did not reveal any stone or pottery fragments. In the second layer we noticed remains of alabaster fragments in the southeastern corner of the square. We sifted all the material to detect any decorated piece. The fragments were mostly very small and in places the alabaster had been pulverized to dust. We thought this might be an indication of the white hippopotamus once seen by our predecessors in this area of the Peristyle Court. From the third layer on, the alabaster fragments were larger, but all undecorated and none showed a worked surface.

No other stone fragments were found in the remaining area of the square, only a few very small pottery shards were recovered. The earth was very dark and uniform. At this point the water level was very close. Finally in the sixth layer, we found some traces of the foundation of the column bases and the sandstone pavement. All of the remains had been eaten by the salt and could only be detected as a

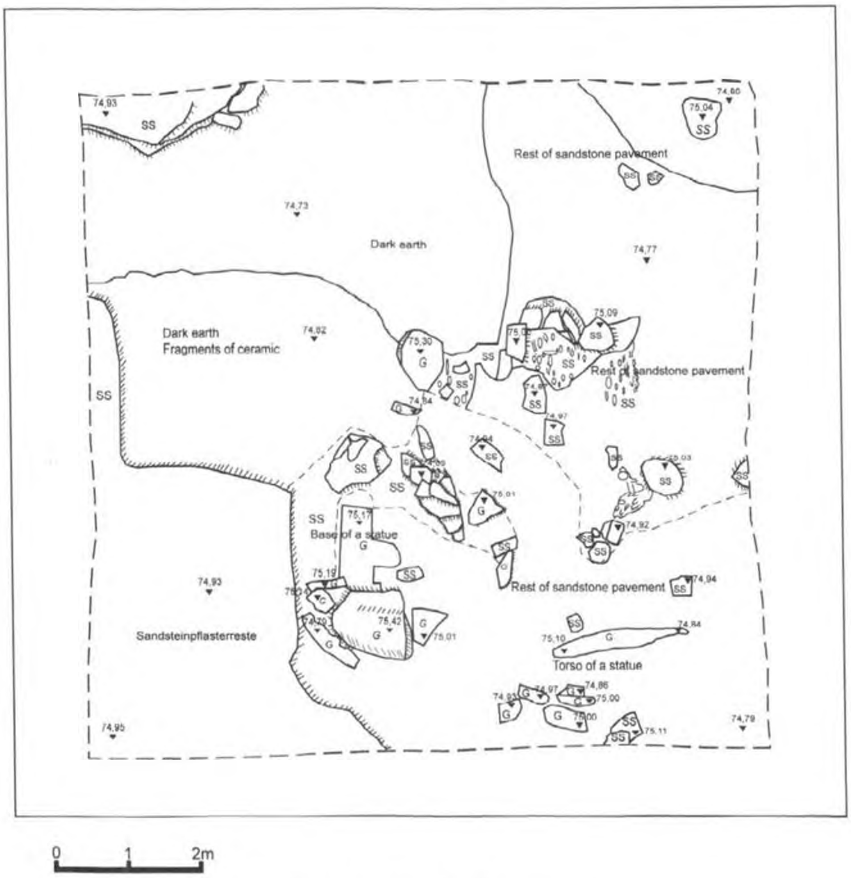

Fig. 9 Square 990 South 3, layer 8

result of the change in the colours on the ground. On the other hand the high water level made it very difficult to distinguish differences between the materials.

In January we made a second sondage, PEN Schnitt 2, situated in squares 940 N4 and N5. We opened a trench of 2 m x 3 m (see Fig. 1). We were following an indication given by the radar survey made by B. ILLICH, who had detected some anomalies in this area. We dug to a depth of 1 m without any results. The earth was quite uniform and we only found a few little fragments of ceramic.

In January the level of the water went down by 40 centimetres and a considerable area in the northern half of the East Portico (PEN) became free of water. This enabled us to observe a big agglomeration of alabaster in the baulk between the precedent excavations and our sondage PEN Schnitt 1. We decided to make a new sondage, PEN Schnitt 3, with a very little trench of 1 m x 2 m situated in the zone corresponding to the square 960 N4 (see Figs. 1, 3). Here we found numerous small fragments of alabaster, most of them completely destroyed, and in most cases the alabaster dissolved instantly into dust. On the 15th January the water level started to rise again and we stopped the work in this section.

The last sondage was started on the above date in the northeastern part of the Peristyle Court (PEN Schnitt 4), following the anomalies indicated by the electromagnetic survey of H. BECKER. This sondage was placed inside the square 960 N3 (see Figs. 1, 3). At a depth of 80 centimetres, we met traces of a sandstone pavement. But like in PEN Schnitt 1 the foundation of the pavement had been completely eaten by the salt and was extremely damaged. During the clearance we found some pottery shards and a few black granite statue fragments[19].

Before the end of the season, the paved surfaces in the court, and all column bases of the West Portico were covered again with fine sand as a temporary measure of protection.

M.S.

3. The Royal Statues Between the Columns of the Porticoes; Documentation, Reassemblage, and Conservation

Together with the clearance, the mapping and the study of architectural remains, we continued the study and the documentation of all sculptural remains, the grouping together of dispersed statue parts, assemblage of smaller fragments, and conservation of damaged pieces.

Since the investigations of H. Ricke and G. Haeny, we know that the colossal statues of the king were placed between the first rows of the columns of the porticoes in the Great Peristyle Court[20]. In the East and West Porticoes, these would have been divided into two groups of five on both sides of the main axis; in the North and South Porticoes, their number has to be verified. For the scale, the type, and the position of these colossi within the porticoes, H. Ricke had suggested a reconstruction of a part of the portico with papyrus bundle columns, between them a standing colossus wearing the crown of Lower Egypt[21]. In our previous report we presented a sketch showing the iconography of the king on the quartzite colossi in the northern half of the court and on the red granite colossi in the southern half[22]. A more detailed drawing may now illustrate the type of the northern colossi in quartzite (Figs. 10–11) – a similar drawing representing the red granite colossi is in preparation.

3.1 The Royal Quartzite Colossi in the Northern Half of the Peristyle Court

After having mapped the position of all dispersed blocks and statue parts during our first campaign, we had the large parts of the standing royal colossi in quartzite (which derived from the northern half of the West Portico) raised and placed singly on wooden blocks in the open court, while smaller fragments and splits were registered and stored for study.

3.1.1 The Royal Colossi in the Northern Half of the West Portico (PWN)

All the large fragments which we had documented and grouped during previous seasons, are now being assembled for drawing and future reconstruction. Simultaneously, the smaller fragments and splits are gradually finding their place on the larger pieces where they are immediately fixed, if it is obvious that they won't prevent further insertion of new fragments in the future.

3.1.1.1 Colossus PWN I (An in former records)

PWN I, the first colossus from the axis, was sculptured in a very homogeneous brown quartzite and was found broken into pieces as a result of its falling. During our fourth campaign in the previous season (2002/I), we had grouped a few more pieces of this colossus together, and suggested a temporary reconstruction of the back inscription[23]. In the course of our fifth campaign in winter 2002/2003, we

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[19] The third and the fourth sondages in PEN were mapped by M. El-Amouri. See his report above, pp. 189–194.

[20] *BÄBA* 11, pp. 27, 83–90.

[21] *BÄBA* 11, p. 24, fig. 4.

[22] *MDAIK* 59, 2003, p. 433, fig. 2.

[23] *MDAIK* 59, 2003, p. 436, fig. 3.

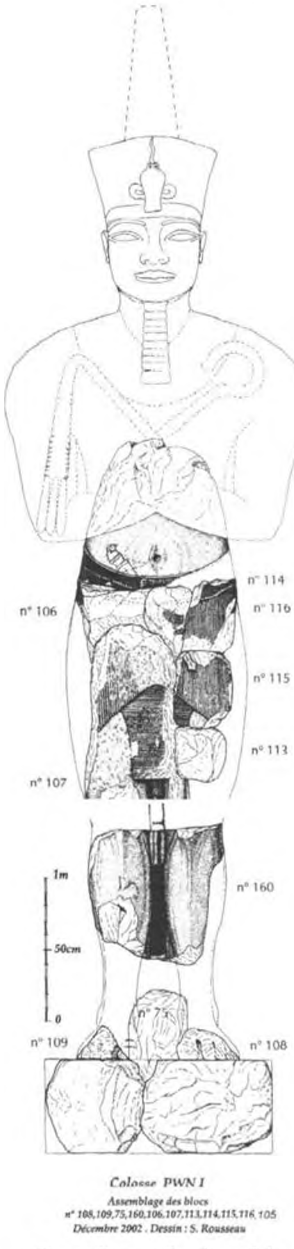

Fig. 10 Reconstitution of the quartzite royal colossus PWN I

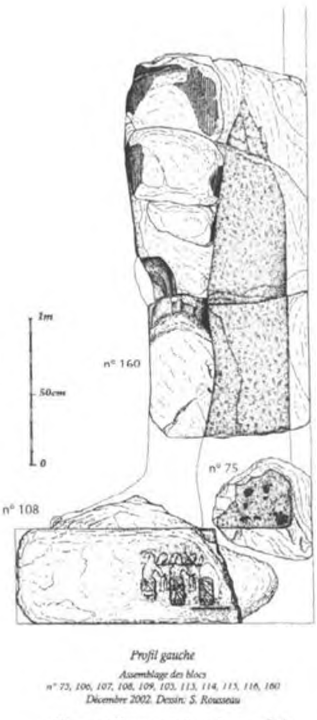
1m
50cm
0
n° 160
n° 75
n° 108
Profil gauche
Assemblage des blocs
n° 75, 106, 107, 108, 109, 105, 113, 114, 115, 116, 160
Décembre 2002. Dessin: S. Rousseau

Fig. 11 Reconstitution of the colossus PWN I, left side

made a trial assemblage of the torso with the help of C. Delaporte and Hassan M. Ahmed. The reconstructed torso is now temporarily placed on its right flank on a bench in the southeastern corner of the Peristyle Court. At present it is composed of eight pieces each of which join the other more or less directly (inv. nos. 105, 106, 107, 113 to 116, 160), and three other blocks belonging to the feet and base (inv. nos. 75, 108, 109). A drawing made by S. Rousseau shows the reassembled torso, completed by a drawing of the head, which is now in the British Museum (EA 7), and parts of the chest made from drawings of preserved pieces from other statues of the portico (Figs. 10, 11).

The blocks, which derive from the statue's monolithic base are under study for reconstruction, as major parts are now missing and the blocks do not directly join each other, nor do they link directly to the torso, as the feet are badly destroyed. With regard to the decoration of foes: while clearing the south part of the Peristyle Court, we recovered in the lowermost level from square 990 S2 (PHS 5), a fragment (inv. no. 1338) broken from the right side of the base of colossus PWN I, which would join another piece found during earlier excavations and now only known by a photography. These foes correspond to nos. 12, 13, 14 of the AN list once published by E. EDEL[24].

The socle of this colossus was originally formed by blocks of black granite, which were later re-inscribed by Merenptah. It was found *in situ* and mapped during the excavations of the Swiss Institute[25]. When we cleared this zone again at the beginning of our work, and mapped all statue parts, we found the blocks partly sunk in a pit dug underneath the socle, probably made by stone robbers, and filled with statue parts, including a new piece broken from the leg of the colossus with a part of the inscribed back slab[26]. This socle has been temporarily placed in the open part of the court[27] and will be reconstructed in its original place when the ground is stabilized and secured (inv. nos. 96 to 100).

3.1.1.2 Colossus PWN II (BN in former records)

The colossus PWN II, second to the north of the axis, is sculptured in a rock of silicified reddish brown quartzite with large zones of pebbles. This colossus was the most complete of all the statues in the West Portico at the beginning of the 19th century. The head is now in the British Museum (EA 6). The torso had been previously uncovered during the excavations of the Swiss Institute. It was found lying within the portico in a westerly direction where it had fallen[28]. It is comprised of two pieces forming the torso (inv. nos. 61, 62), one piece from the legs (inv. no. 120), several smaller pieces broken from the belt, the kilt and the back pillar, and one large block which composes the pair of feet on the once well preserved base (inv. nos. 92 and 152). When we cleared the area again for mapping, we isolated the pieces of the torso and legs *in situ*, to study and prepare a plan for its reconstruction and presentation.

The base had been badly damaged by the fires of the 1970s and suffered breaks and several cracks during the fire of 1996. After mapping and emergency conservation, we advanced the base and raised it on cement cubes, which were placed on a layer of pebbles. We later replaced the cement cubes by wood, and the pebbles by pure sand. In our fifth campaign, we collated the inscriptions with G. BARNICKEL and M. STÖRL, who also made copies of the decoration of Palestinian and Mesopotamian foes engraved around the base.

Four black granite blocks[29], which we found scattered in front and around the base of this colossus, belong to its socle (inv. nos. 93, 94, 95, 147). They are now grouped on a raised surface in the court, to the east of the colossus.

3.1.1.3 Colossus PWN III (CN in former records)

The layer of fine reddish yellow quartzite in which this colossus was cut is composed of very porous and friable zones, which have been badly attacked by erosion over the centuries and, more recently, by the action of the successive fires. We had grouped several pieces of the torso on a raised level within the open court in our temporary open-air block yard (inv. nos. 82, 85, 88). Smaller fragments splitted by the action of fire have been replaced on the chest and the torso.

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[24] *Bonner Biblische Beiträge* 25, 1966. Prof. GÖRG kindly gave us a copy of the old photography which will be published in his forthcoming new edition of these foes, see M. GÖRG, *ÄAT*, forthcoming volume

[25] *BÄBA* 11, p. 87, fig. 14a, pls. 18a, 20b; see Faltplan III.

[26] *Second report*, in: *MDAIK* 59, 2003, p. 436, fig. 3 (block 160), pl. 59h.

[27] *Ibid.*, pl. 71b.

[28] *BÄBA* 11, p. 86, pls. 18a, 19a.

[29] *Ibid.*, pp. 86–87, fig. 14b.

We identified the head of this statue, which was found in the western part of the North Portico[30]. It was severely damaged after the fires of the 1970s, which had cracked and split the head into numerous fragments. It had been hastily reassembled and restored by the Antiquities Department after the fires, but is considerably deformed by weathering and vandalism (inv. nos. 72 to 80, 84, 86). Tayeb H. Ibrahim took apart the old restorations and has started the cleaning and the reassemblage of these fragments (Tf. 31a, b); simultaneously P. Zwetkow studied the stone and analyzed the different types and preparations of adhesive in order to join the dismantled pieces. A major part of the royal face is now missing, and full restoration of this head cannot be carried out before the key parts have been found.

The base of this colossus (inv. no. 126) has been severely damaged by fire and practically all parts except the back are now destroyed or missing. As all other statue bases of this portico, the remains of this one were brought forward and raised on wooden cubes until the soil can be stabilized and the statue replaced.

3.1.1.4 Colossus PWN IV (Dn in former records)

The colossus PWN IV has been sculptured in a block of reddish brown quartzite with wide zones of purple colour. This statue is also very fragmented and badly damaged. The head could be the one which was left to the north of the portico and which we had raised on a bench of bricks during our first season[31]. However, if that head will prove to belong to the northernmost colossus PWN V, then a very damaged face, which we found buried in the northern portico during the previous season, could also be attributed to this colossus (inv. no. 135)[32]. The pieces of the torso are grouped in the open court like those of the companion colossi. The base of this statue was damaged by fires, hastily restored, and set together with cement mortar (inv. nos. 122, 123). Now several parts are still missing from the sides and the front part of the base. Recently, we had the right half of the front part of the base mechanically dismantled and restored. Many inscribed quartzite fragments belonging to both bases PWN IV and PWN V could be recovered from the cement core and replaced on the bases. Other fragments, including sandstone pieces, have been cleaned and stored for further study. We hope to recover the missing parts in an older deposit or in one of the Theban storerooms. For the present, the broken parts are being temporarily protected by mud bricks.

3.1.1.5 Colossus PWN V (En in former records) (Tf. 31e, f)

PWN V, the northernmost quartzite colossal statue of the king in this portico, is cut into a very warm red soft quartzite with zones of agglomerated pebbles and purple veins. The torso (inv. no. 129) was lying within the northern portico when we uncovered it again. Since then, it has been mapped and moved to a higher level near the other statue parts from the same portico.

The statue base (inv. no. 128) is the one originally bearing on its sides the representation of bound Aegean foes, found turned downwards but entirely conserved[33]. When the site burned in the early 1970s and again later, the base had been severely fragmented into hundreds of pieces, and was eventually restored by the conservators of the local inspectorate. At the beginning of our work in 1999–2000, we had to dismantle this base to save the preserved fragments from the attack of the weeds, and the effect of salt on the modern cement and adhesive, which had been used by the former restorers to hold the pieces together. H. LAFORE, at that time the stone conservator of our team, numbered the dismantled pieces and recovered from the core of the cement mortar several parts belonging to the surface of the stone. Since 2001, S. DUBERSON and the restoration team have cleaned the numerous fragments from previous restorations. Both chemical and mechanical methods were used to remove the former heavy adhesive from the breaks. The deposit of cement was removed by micro-blasting (Hydro facade jet pearls F 523, blast media). The fragments were studied and the matching pieces gradually grouped together. In winter 2002/2003 the back right part of the base, which had been badly fragmented, was reassembled: the fragments were joined to each other with a special fast epoxydic resin (araldite 2010). To prevent future infiltrations of dust, water and weeds, the inner voids were filled with an acrylic mortar (Motema) produced with fine sand. These fillings also play a structural role for internal stability. A considerable part from the middle of the right side of the statue base is now missing, and we will not pursue the reassemblage before this part has been found. Only then can the reconstructed front and back parts of the statue be joined by removable dowels. We hope to eventually rediscover these missing parts in older deposits or in one of the Theban storerooms, when we carry on our catalogue of dispersed material from Kom el-Hettân. For the present, the reassembled pieces are being protected by mud bricks. The numbered and still unplaced fragments and assemblages have been stored.

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[30] *Ibid.*, p. 87, pl. 17; B.M. Bryan, in: A.P. Kozloff/B.M. Bryan/L.M. Berman (eds.), *Egypt's Dazzling Sun, Amenhotep III and his world*, The Cleveland Museum of Art 1992, fig. 6b, p. 157.

[31] *BÄBA* 11, pl. 16b; see our preliminary report, in: *MDAIK* 57, 2001, p. 276; *CRAIBL* 2000, p. 1034, fig. 13.

[32] *MDAIK* 59, 2003, p. 432.

[33] *BÄBA* 11, p. 85, pl. 18b. See another illustration of the same base: A.P. Kozloff/B.M. Bryan/L.M. Berman (eds.), *Egypt's Dazzling Sun, Amenhotep III and his world*, The Cleveland Museum of Art 1992, fig. II.13 on p. 57. The Aegean foes were later illustrated by a sketch and published by E. Edel, in: *Bonner Biblische Beiträge* 25, 1966, EN.

A full report on the conservation process of these statues will be published when trial assemblies of each colossus can be completed, and when their presentation and a long range conservation program can be decided upon, recommended and approved.

3.1.2 The Royal Colossi in the Northern Half of the East Portico (PEN)

The team of stonemasons removed the pair of feet belonging to colossus PEN IV, which we had uncovered during the previous season (inv. no. 1300), from the ground water where it had sunk. It was immediately cleaned and placed on a raised surface in the open court. The base is uninscribed, and bears no decoration. We also discovered, during the previous season, the lower part of the back slab and the back of the base from the northernmost colossus of this portico, PEN V, which we have completed with a joining piece.

Except for smaller quartzite fragments with sculptured or inscribed surfaces, which belong to one of the colossi of this portico, the clearance of PEN did not reveal any parts of the torsi or heads. However, at the beginning of our excavation, we had found large pieces of quartzite royal colossi deposited in the northern part of the Peristyle Court. Their bases are not inscribed, and pieces found in the eastern half join others in the west. We believe that these are the statue parts uncovered during earlier excavations in the northern half of the East Portico[34]. In the eastern half we had found four blocks forming the upper part of a royal torso, from the beard to the chest (inv. nos. 213 to 216), as well as a grouping of three other blocks (inv. nos. 210 to 212), one from a right foot on a part of an uninscribed base, and two others forming the right leg with a small piece of inscribed back slab bearing the end of the titulary of the king, which joins the inscribed and published parts of the back slabs found stored in the northeastern corner of the court by the excavations of the Swiss Institute[35] and which we in turn found deposited in the western part of the court (inv. nos. 25, 26, 29). All these pieces could belong to one of the colossi in the East

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[34] See *BÄBA* 11, pp. 87–88.

[35] *BÄBA* 11, pp. 87–88, pls. 19b, 37 (FN).

Portico. These blocks are now isolated on benches and will be studied and drawn during our next seasons.

We further identified and grouped four statue parts in quartzite, which we had found scattered around the court during the first season (inv. nos. 3, 10, 11, 50). They derive from the torso of a royal colossus in quartzite, found during earlier excavations, then quarried by vandals and later declared lost[36]. The four pieces from the right side of the torso form the belt and the kilt of the king, with a scanty fragment of the large back slab, which was once better preserved.

3.1.3 Colossi in the North Portico (?)

A royal head in quartzite, which we uncovered in PNE during our previous season, is up to now the only evidence for royal colossi in the North Portico of the Peristyle Court. As seen above, we had already found pieces of quartzite colossi placed near and in the North Portico, in the eastern (PNE) as well as western (PNW) halves, together with inscribed and published pieces, which had no recorded provenance[37]. However, as is mentioned above, the inscribed pieces join uninscribed bases, which seem to have been found in the East Portico. Therefore it remains to be verified, if the head had or had not been deposited there by earlier excavators. This question will remain open until the North Portico can be thoroughly cleared and mapped. This will be one of our major tasks in the coming seasons.

To summarize the finds, we have evidence of five colossi in PWN, with two black granite socles and a piece of a third. The bases of these five statues, once found *in situ*, are decorated with foes; we have identified parts of the torsi and four heads, perhaps even five, if it is proven that the damaged head of PNE was an earlier deposit from the excavations in PWN.

3.2 The Red Granite Colossi in the Southern Half of the Peristyle Court

Beginning at the southern half of the Peristyle Court in the chronological order of the finds, our inventory comprises: one head wearing the white crown of Upper Egypt, found at the beginning of the 19th century, acquired by the Louvre from the Salt Collection, together with a pair of feet on a base decorated with representations of southern foes (Louvre A 18, A 19)[38]. A second head, discovered by L. Habachi, is now in the Luxor Museum (J. 133, C. 126)[39]. Three other very damaged parts of heads were found certainly during the excavations of the Antiquities Department in the 1950's, to judge by old photographs, which shows one of them under restoration near the large South Stela at the entrance of the Peristyle Court. We found the latter deposited in the southeastern corner of the Peristyle Court (our inv. no. 16). It is now temporarily put on display near the South Stela, together with two pairs of feet placed on undecorated bases (inv. nos. 15 joining 19, and no. 23)[40], one bearing a later inscription by Merenptah. Two other fragments found reburied in the south of the West Portico derive from a similar head (inv. nos. 101, 102), one from the nape with the king's left ear, the second from the upper part of the white crown. Parts of the inscribed back slabs from the torsos of these statues were published by the

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[36] *Cf. BÄBA* 11, pp. 101–102, pl. 32a. Note that the torso belongs simply to the type of the standing colossi of the Peristyle Court, with hands crossed on the chest, and not holding an offering table as G. Haeny suggests (*ibid.*, p. 102); therefore, his comparisons with such statues of Akhenaten and considerations on the artistic evolution of this period are superflous.

[37] See n. 35.

[38] PM II, p. 453; A. Varille, in: *BIFAO* 35, 1935, pp. 161–171, pls. 1–4.

[39] PM II, p. 453; *Luxor Museum Catalogue*, no. 126, pp. 96–97, pl. X; *BÄBA* 11, pls. 15, 16a; A.P. Kozloff/B.M. Bryan/L.M. Berman (eds.), *Egypt's Dazzling Sun, Amenhotep III and his world*, The Cleveland Museum of Art 1992, cat. no. 5, pp. 154–155.

[40] See H. Sourouzian, *Recherches aux temples thébains d'Aménophis III (Kôm el-Hetan) et de Merenptah à Thèbes, CRAIBL* 2000, p. 1035, fig. 11.

Swiss Institute[41]; we found some of them deposited in the south-east corner of the court, together with unrecorded pieces, among which parts of two chests (inv. nos. 18 and 21, 20 and 22), with royal hands crossed and holding the flail against the right shoulder (left shoulder lost).

During the preliminary clearance of the southern half of the West Portico for mapping, we discovered in the rubble other inscribed pieces from back slabs[42] as well as parts of royal beards, pleated kilts and small base fragments decorated with southern foes. What is noteworthy is that we only found very few fragments of a base, and no indication of a foundation pit, which we had expected, for the westernmost colossus of the South Portico.

The previous season had revealed the quarried spine and hundreds of fragments and splinters from the torso of a red granite colossus, which had fallen in N-E direction in square 990 S3 (PHS 6). These fragments were completed this season by a large piece of the quarried back of the colossus, and they are now under study.

The ground of the corresponding zone in the Southern Portico has been completely destroyed and there are scanty remains of the pavement. However, in the southernmost part of this square, we found that the colossal feet with the base had fallen into a pit, which seems to have been dug underneath the statue base by robbers in search of a foundation deposit. Pieces broken from the legs of the royal statue were found around the rectangular base on which the royal feet stand. One piece comprising the lower part of the legs could be joined to the feet in a trial assemblage (Tf. 30b). The back slab and the back of the base are missing. The base (inv. no. 1610) is 40 cm high and 158.5 cm wide. Its conserved length measures 147 cm. On the upper surface of the base, in front of the royal feet, two lines of inscription with the titulary of the king are engraved, which end with the epitheta of the king respectively beloved of Sokar, lord of the *shetyt*, and of Amun-Re, lord of the throne of the Two Lands[43]. The latter having evidently been chiselled into the stone during the reign of Akhenaten, and later engraved again during the restoration period. Around the base are representations of southern foes bound by the plant of the south, divided in two files on both sides of a *sema-tawy* sign, which marks the axis on the front side. Six foes are represented on the face of the base, and six are conserved on each side. Like on the statue base in the Louvre today, both plants of the *sema-tawy* symbol are water lilies of the south and on all three conserved sides of the base, the busts of the foes surmounting their name rings are all of African type, represented with short curly hair and large earrings. The cartouches contain some generic names known from other name lists, such as the wretched *Kush*, *Miw*, *'Itr*, *Grss* and *Irm*, on the face of the base but new names are also found inscribed on the sides of the base. These names are under study and a drawing of the foes is in preparation. The list of foes can perhaps be completed with new pieces of the base after thorough clearance of the pit in the square. The study of inscribed and decorated granite fragments found scattered in the rubble in and around the court, will also contribute to complete our vision of the colossus. After recent cleaning and emergency conservation measures, we temporarily transferred the base to the adjoining square 1000 S3 (PHS 3), where it has been placed on wooden blocks and is protected by a mud brick enclosure, which we filled with fine sand.

In the adjacent square to the east, 980 S3 (PHS 9), we found the valuable remains of two other colossi also fallen in the N E direction. A head turned downwards, and a torso obliquely crossing the square. The damaged head wearing the white crown with frontal uraeus, measures 1.30 m high (inv. no. 1600). The right side of the face is relatively well conserved, showing, in spite of severe damage and a partly broken nose, the characteristic smoothly polished surface of the sculpture, and the distinctive features of Amenhotep III, with his almond shaped eye framed by large cosmetic lines and surmounted by a rounded eyebrow in low relief; the short nose, and the pursing large lips bordered by a sharp rim. The royal beard, which was attached by large straps to the temples of the king, is broken. The torso has been ruthlessly quarried from the back, and only the left half remains, turned down. The back slab is missing. We could identify the left elbow, and a part of the waist and belt with zigzag pattern, before covering the whole square with sand until next season.

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[41] *BABA* 11, pl. 37 Fs I–III.

[42] *Second report*, in: *MDAIK* 59, 2003, p. 430, pl. 72f.

[43] The names of these two deities are attested parallely all through the temple precinct. See *BÄBA* 11, p. 47 and fig. 13.

4. Other Royal Statues and Divine Sculptures[44]

It is noteworthy that we found within these squares, inscribed or decorated fragments of the northern quartzite colossi, parts of royal sandstone statues, as well as fragments and splinters of divine statues in dark granite. This mixed material is practically all that has been found and attest to remains of earlier excavations.

4.1 The pieces of the sandstone statues found in square 990 S1 (PHS 4) are of two categories. The lower part of a royal face (inv. no. 1612; 28 cm high, 38 cm wide, 29 cm deep) and the two parts of horizontally striated square sectioned beards (inv. nos. 1613, 1624; respective height 15 cm, 11 cm), attest to the presence of large royal statues. These fragments can be compared to parts of large sphinxes with royal heads found reused in the neighbouring temple of Merenptah, or similar ones found recently in the Ramesseum. During the preliminary clearance of the Peristyle Court we found the piece of a paw (inv. no. 220) of a sandstone sphinx or lion in the rubble. Parts of the decorated blocks discovered during the excavations of Ricke and Haeny can now be identified as pedestals of sphinxes[45] similar to those found by us in the temple of Merenptah[46], but there is still very little evidence at Kom el-Hettân for royal sphinxes in sandstone. These pieces of a face and beard also remind one of the royal effigies known as osiride type statues or pillars, which show the king wearing an elaborate costume instead of the mummy shroud, as can be seen in the first court of the great temple at Medinet Habu.

4.2 On the other hand, the two fragments of heads wearing the *nemes* headdress and linked in the back to another sculpture (inv. nos. 1615, 1616; respective height 14 cm and 13 cm), belong to smaller statues of the king, very similar to the mummiform statues which we find attached to the breast of larger statues of sphinxes or other divine representations, as we have discovered them reused in the temple of Merenptah[47]. Further clearance of the court and the study of all sculpture remains in sandstone will certainly help us to reconstruct these statue types and hopefully locate them in the temple precinct.

4.3 The search for the alabaster hippopotamus statue, once seen in the North Portico, continues[48]. Of all the alabaster fragments or splinters collected up to now, none shows the slightest evidence of such a statue.

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[44] For a catalogue of royal statues in the reign of Amenhotep III, including statuary of Kom el-Hettân, and particularly the previously known royal colossi in the Peristyle Court, see A.P. Kozloff/B.M. Bryan/L.M. Berman (eds.), *Egypt's Dazzling Sun, Amenhotep III and his world*, The Cleveland Museum of Art 1992, Chapter V, pp. 125–184, pls. 5–12; E.-Ch. Strauss-Seeber, *Die Königsplastik Amenophis' III.*, 2 volumes, Munich 1997.

[45] *BÄBA* 11, pl. 38 (20, 21, 24).

[46] See my preliminary report, H. Jaritz et al., in: *MDAIK* 55, 1998, p. 54.

[47] For the jackal statues see: *MDAIK* 55, 1998, pp. 53–54, pl. 11b, c.

[48] *BÄBA* 11, pp. 102–104. By kindness of C. von Pilgrim, director of the Swiss Institute, we had access to earlier records which seem to indicate that the white hippopotamus stood to the east of the modern *sakiyeh* in the North Portico. Our next soundings will focus particularly on that area.

4.4 Anthropomorphic divine statues have been attested to in great quantity. In all parts of the temple where we surveyed the surface debris, carried out systematic clearance by sifting older mounds of rubbles, or doing regular excavations, we collected a considerable amount of dark granite fragments and splinters, which seem to derive from innumerable divine statues. A great part of this lot comes from earlier excavations' deposits in the Peristyle Court, mainly at the entrance of the West Portico, which we cleared during our second campaign. This zone has been dug up for centuries and none of the previous finds there has an exact recorded position. Our documentation of all these fragments continues. They attest to two major groups of sculpture: statues of the lioness goddess Sekhmet, and statues of other anthropomorphic deities. After long research on the monuments of this reign, Betsy Bryan has realized an extensive catalogue of the divine statues of the funerary temple, which shows the extraordinary variety of the temple repertoire[49]. Our collection of thousands of fragments is probably a part of those divine statues, as well as of yet unidentified or lost ones. A full inventory of these fragments will be completed together with the documentation, which is carried out each season. Ch. Perzlmeier will carry out a study of the statues of Sekhmet, in preparation for a comprehensive catalogue.

A brief survey of the divine statues which we uncovered in the Peristyle Court shows how little, up to now, has been left *in situ*. We will briefly mention four lower parts of the seated goddess Sekhmet which were previously found in this area and left *in situ*[50], and the torso of a reburied Amun which we rediscovered during the previous season[51]; as well as smaller parts of other deities, yet unidentified. It seems likely that unnumbered statues of Sekhmet were placed within the court as well as at the porticoes of the Great Peristyle Court. But up to now, we have not found one example *in situ* and are ignorant of the exact position of these statues. The statues of Sekhmet in the Peristyle Court seem to represent the goddess seated, whereas the six statues which we found reburied in the Hypostyle Hall, are of the standing type, as we will see below. A question may be asked: Was the attitude of the goddess related to the position of her statues in the temple? Did the goddess appear seated in the Peristyle and standing in the Hypostyle? Future thorough study of all fragments will confirm or overthrow this assumption.

H.S.

V. Work in the Hypostyle Hall

1. The Clearance

Having been covered by debris and refills for many centuries, only some bases of columns are now visible in the southern half of the Hypostyle Hall. Our predecessors had partially cleared this area, which was summarily indicated on the map showing the column bases in the southern half of the hall. However, the exact limits of this hall are as yet not known, and it was necessary to figure out a more precise and exhaustive plan for this part of the temple.

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[49] B. Bryan, *The statue program for the mortuary temple of Amenhotep III*, in: S. Quirke (ed.), *The Temples of Ancient Egypt, New discoveries and recent research*, London 1997, pp. 57–81, pls. 5–29, and II–V.

[50] These are four statues left *in situ* from ten examples found from 1956 to 1970, and from a considerable number excavated much earlier by the agents of Salt. In photographs taken in the 1960s, three more statues are shown near the southern stela, which means that such statues were also found in the eastern part of the Peristyle Court. On these seated Sekhmet see: G. Haeny, in: *BÄBA* 11, pp. 90–98, pls. 22–23.

[51] *MDAIK* 59, 2003, p. 429, pl. 72a.

We started by cleaning several heaps of rubble left by earlier interventions. We distinguished three heaps of debris: Middle Hill, West Hill and South Hill. We completely sifted the rubble to collect all fragments from earlier excavation. When the entire surface had been levelled out, we started clearing five regular squares of 10 m x 10 m and one square of 10 m x 6 m in the south (see Fig. 1).

We began in the northern half of the Hypostyle Hall, with the clearance of two squares to the north of the axis (1040 N1, 1030 N1), leaving a baulk of 1 m between the squares. The first square had been excavated in three layers before the ground level was reached, but there were no remains of columns or bases. In the second square, two layers were cleared, also without any trace of columns. The material was rather mixed. We recovered several sandstone reliefs, some decorated statue fragments in black granite, a few fragments in red granite, and a great quantity of small pottery shards.

In the southern half of the Hypostyle Hall, we firstly opened two squares to the south of the axis (1040 S1 and 1040 S2), where five bases of columns were already visible. After cleaning this zone, we reached the ground level having only removed one layer. Here, between both squares, we discovered a deposit of six standing statues of the goddess Sekhmet in black granite, two of them with their lioness head. Only the bases of these statues are missing.

Finally, we opened two other squares in the southern half of the hall, one measuring 10 m x 10 m (1030 S1), where a column base still remains, and the other 10 m x 6 m (1040 S3). Here we only needed to level the area, as both squares lay deeper than the preceding ones, and the ground level was reached after clearing of only a thin layer of surface debris and rubble.

M.S.

2. Mapping and Preliminary Observations on the Bases of the Columns (Figs. 12, 13)

La première étape de la fouille de la partie sud de l'hypostyle a permis de dégager convenablement ce secteur jusqu'au niveau du sol du temple. Seul un bloc du dallage est préservé. Les bases de colonne de l'hypostyle sont placées dans ce niveau de sol, de manière à ce que le lit supérieur de leur plinthe soit au niveau du sol[52].

La mise en œuvre des colonnes sur leur base montre une certaine régularité. Les bases de colonne relevées ont des diamètres plus ou moins constants (un rayon de 1,65 m au niveau de leur lit d'attente) et leur situation est organisée de manière très précise, suivant l'axe du temple ou perpendiculairement à celui-ci. Les bases de colonne sont un assemblage de deux demi-bases (ou quatre quarts) à plinthe, surmontées par les vestiges d'une colonne. Les demi ou quarts de bases sont symétriques et leur lit de joint latéral se situe soit dans l'axe du temple soit perpendiculaire à celui-ci.

Sur une des bases, très abîmée, nous avons pu relever la présence d'une cavité de queue d'aronde plate qui assurait l'assemblage de deux des quarts de base de colonne. La position de cette queue d'aronde permet de considérer qu'une seconde queue doit exister sous le tambour de la colonne pour assurer la liaison des deux autres quarts. Une autre base de colonne présente un trait de mise en œuvre gravé sur le lit d'attente de celle-ci. Ce genre de trace permet d'avoir un repère visuel au moment de la mise en place de la colonne.

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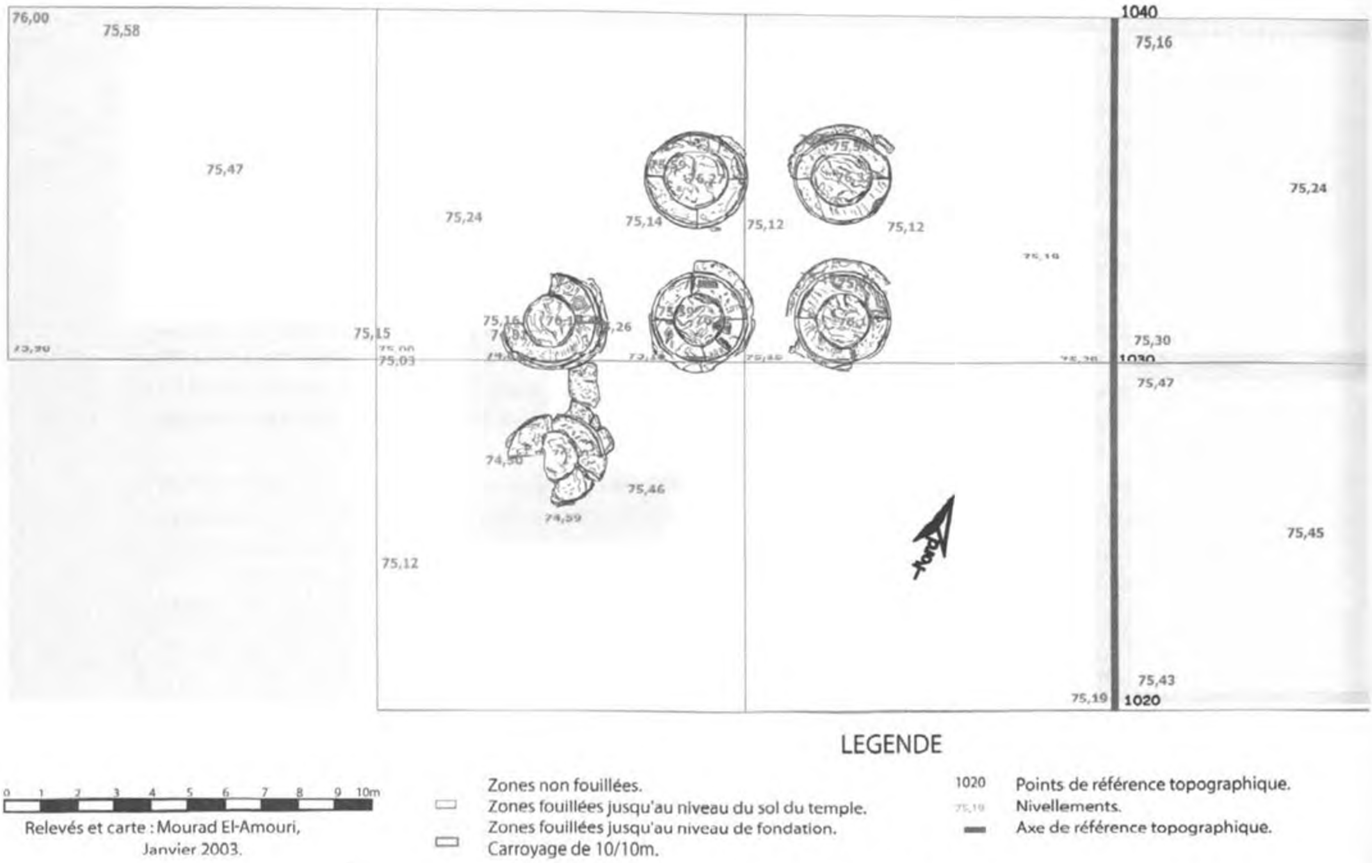
[52] En revanche, dans le portique oriental du Péristyle, la base de colonne semble être directement posée sur les blocs de fondation.


76,00
75,58
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75,46
74,59
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75,45
75,43
75,19
1020
LEGENDE
0 1 2 3 4 5 6 7 8 9 10m
Relevés et carte : Mourad El-Amouri, Janvier 2003.
Zones non fouillées.
Zones fouillées jusqu'au niveau du sol du temple.
Zones fouillées jusqu'au niveau de fondation.
Carroyage de 10/10m.
1020 Points de référence topographique.
Nivellements.
Axe de référence topographique.

Fig. 12 Relevé de la moitié sud de la salle hypostyle

Une base de colonne présente sur son lit de pose un bouchon de parement pour réparer une surface abîmée. Deux autres bases comportent sur leur face supérieure des cavités circulaires et concentriques ayant peut-être servi de cupule. Une autre base porte gravé le dessin d'un jeu.

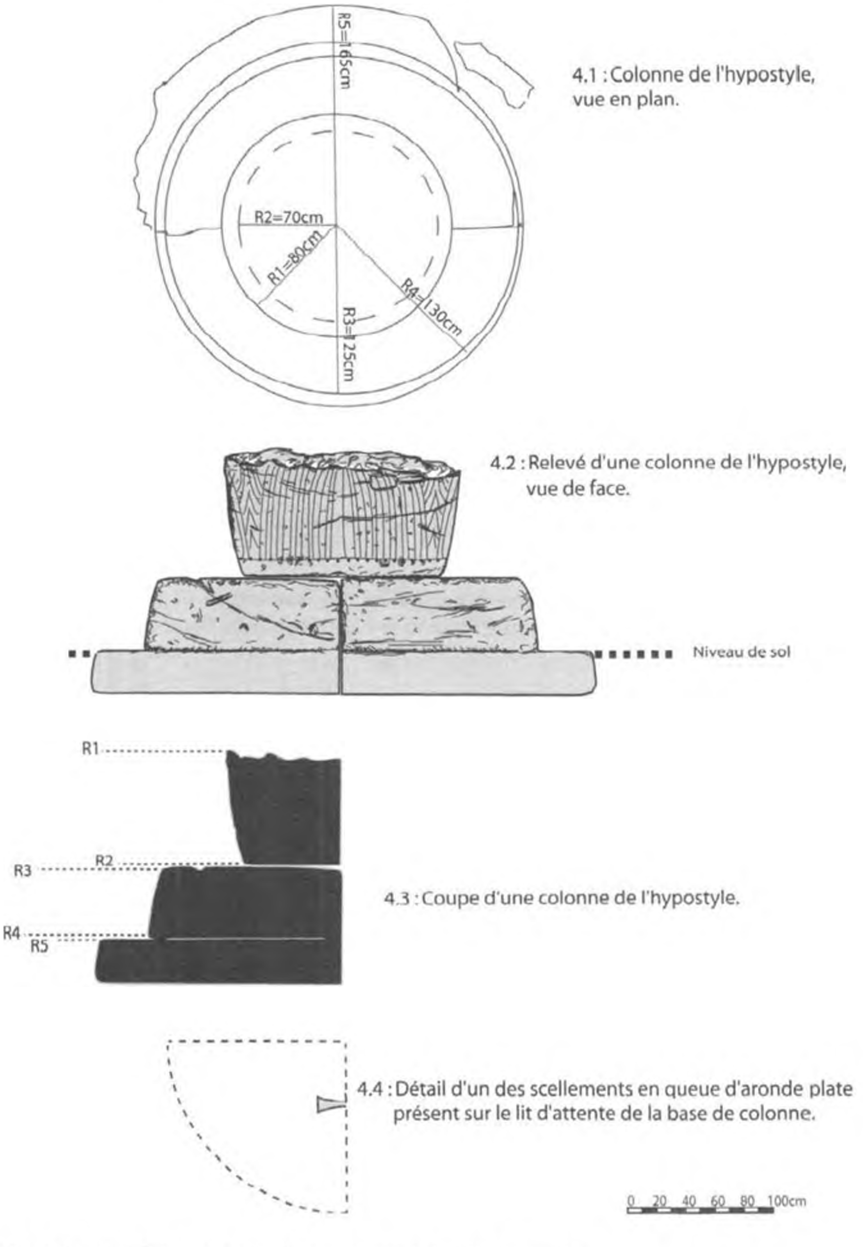
M.E-A.

3. The Statues Found Buried in the Hypostyle Hall (Tf. 32a–d)

In the southern half of the Hypostyle Hall, within the four northernmost columns in squares 1020 S1 and S2, we uncovered a deposit of six statues of the standing goddess Sekhmet in granodiorite, as well as three parts of a sandstone statue.

3.1 The Statues of Sekhmet (Tf. 32b–d)

The lioness headed goddess is represented standing, holding in her right hand the papyrus scepter which is rendered in high relief along her torso, and in her left hand, the symbol of life. One of these statues is conserved from head to legs (inv. no. 1601), and measures 1.28 m high (Tf. 32c). The second



4.1 : Colonne de l'hypostyle, vue en plan.

4.2 : Relevé d'une colonne de l'hypostyle, vue de face.

4.3 : Coupe d'une colonne de l'hypostyle.

4.4 : Détail d'un des scellements en queue d'aronde plate présent sur le lit d'attente de la base de colonne.

Fig. 13 Partie inférieure et base d'une colonne de la salle hypostyle

statue is composed of two joining pieces, the bust and the torso (inv. no. 1602) with a total height of 1.45 m (Tf. 32d). From the four other statues only the torso of each is conserved (inv. nos. 1603 to 1606), measuring respectively 27 cm, 105 cm, 87.5 cm and 52.5 cm high. All feet and statue bases are missing. It seems likely that they may be found in one of the storerooms of Medinet Habu, where a collection of inscribed bases of divine statues previously brought there by the Antiquities Department, were later inventoried by L. Habachi[53]. A new inventory, made this season by Ch. **Perzlmeier**, with photographs and measurements of the breaks at the feet or legs will probably enable us to find the statue bases corresponding to the newly uncovered Sekhmet statues in the forthcoming season.

3.2 A statue partly in sandstone, derived probably from the back of a ram-like statue and two related fragments, all decorated with a pattern of feathers, were found within this deposit (inv. nos. 1607–1609). The larger fragment presents a curved ridge on each side, which looks like a horn incurved around a circular element. It measures 68 cm in width. This object, which at first sight seems to be broken from the back of the head of a monumental ram, is under study for identification.

H.S.

VI. The Pottery[54]

The clearance in 2001–2002 of the western half of the large Peristyle Court and test excavations in the area of the Third Pylon and Third Court produced large quantities of pottery. Despite the absence

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[53] *BÄBA* 11, pp. 98–99, pls. 33–35.

[54] This preliminary presentation is based on the examination of the pottery excavated from 2000 to the end of November 2002, during a study season from 15 to 30 November 2002. The drawings are by Anja Stoll.

Fig. 14

1. Beaker (inv. KHK-196). Prov.: PWN square 7, layer 1. Egyptian Red Slip Ware A, red brown slip on outer surface only. *Cf.* Gempeler Form T608a
2. Flanged cup (inv. KHK-048). Prov.: 3rd Pylon N, section 1, layer 1. Egyptian Red Slip Ware A, red slip darker on the flange. *Cf.* Gempeler Form T319b
3. Deep cup (inv. KHK-032). Prov.: 3rd Pylon N, section 1, layer 1. Egyptian Red Slip Ware A, roulette decoration on the outer rim surface. *Cf.* Gempeler Form T323a
4. Plate (inv. KHK-024). Prov.: 3rd Court North-west, layer 2. Aswan Fine Ware, white slipped. *Cf.* Gempeler Form T106
5. Cup (inv. KHK-092). Prov.: Peristyle Court South, square 1, layer 1. Egyptian Red Slip Ware A, red slip darker on outer surface of rim
6. Plate (inv. KHK-057). Prov.: Peristyle Court South, square 2, layer 4. Aswan Fine Ware, light yellow slip much worn
7. Deep cup (inv. KHK-020). Prov.: 3rd Court NW, layer 2. Egyptian Red Slip Ware A, red slip darker on the outer surface of rim. *Cf.* Gempeler Form T324a
8. Shallow plate (inv. KHK-044). Prov.: 3rd Pylon N, section 1, west half, layer 2. Aswan Fine Ware, white slipped. *Cf.* Gempeler Form T252
9. Cooking pot (inv. KHK-041). Prov.: PEN square 5, layer 1. Nile clay with some fine organic inclusions and abundant fine to medium-sized sand, break red-brown with red core, roughly smoothed surface
10. Shallow cup (inv. KHK-097). Prov.: Peristyle Court South, square 1, layer 1. Egyptian Red Slip Ware A, red slip darker on outer surface of rim. *Cf.* Gempeler Form T230
11. Cooking pot (inv. KHK-189). Prov.: PWN square 31, layer 2. Nile clay with abundant organic and sand inclusions, break red-brown with grey core, rough surface
12. *Qadûs* pot (inv. KHK-062). Prov.: PN square 14, layer 1. Dense Nile clay with abundant medium-sized organic and medium to coarse decomposed limestone inclusions, some sand grits, break red brown with grey core, roughly smoothed surface

Fig. 15

13. Neckless jar (inv. KHK-183). Prov.: 3rd Court, section 1. Marl clay, break grey brown, with abundant fine to medium sand grits, some coarse sands, surface greenish grey, roughly smoothed
14. Small jar (inv. KHK-145). Prov.: Peristyle Court South, square 2, layer 4. Marl clay, break reddish brown, with abundant fine to medium sand grits, numerous elongated air pockets, some limestone nodules, surface grey, very roughly smoothed
15. Short-necked jar (inv. KHK-150). Prov.: 3rd Pylon N, section 1, layer 1. Marl clay, break orange with abundant fine limestone inclusions, numerous fine to medium red ferruginous nodules, surface light grey, roughly smoothed

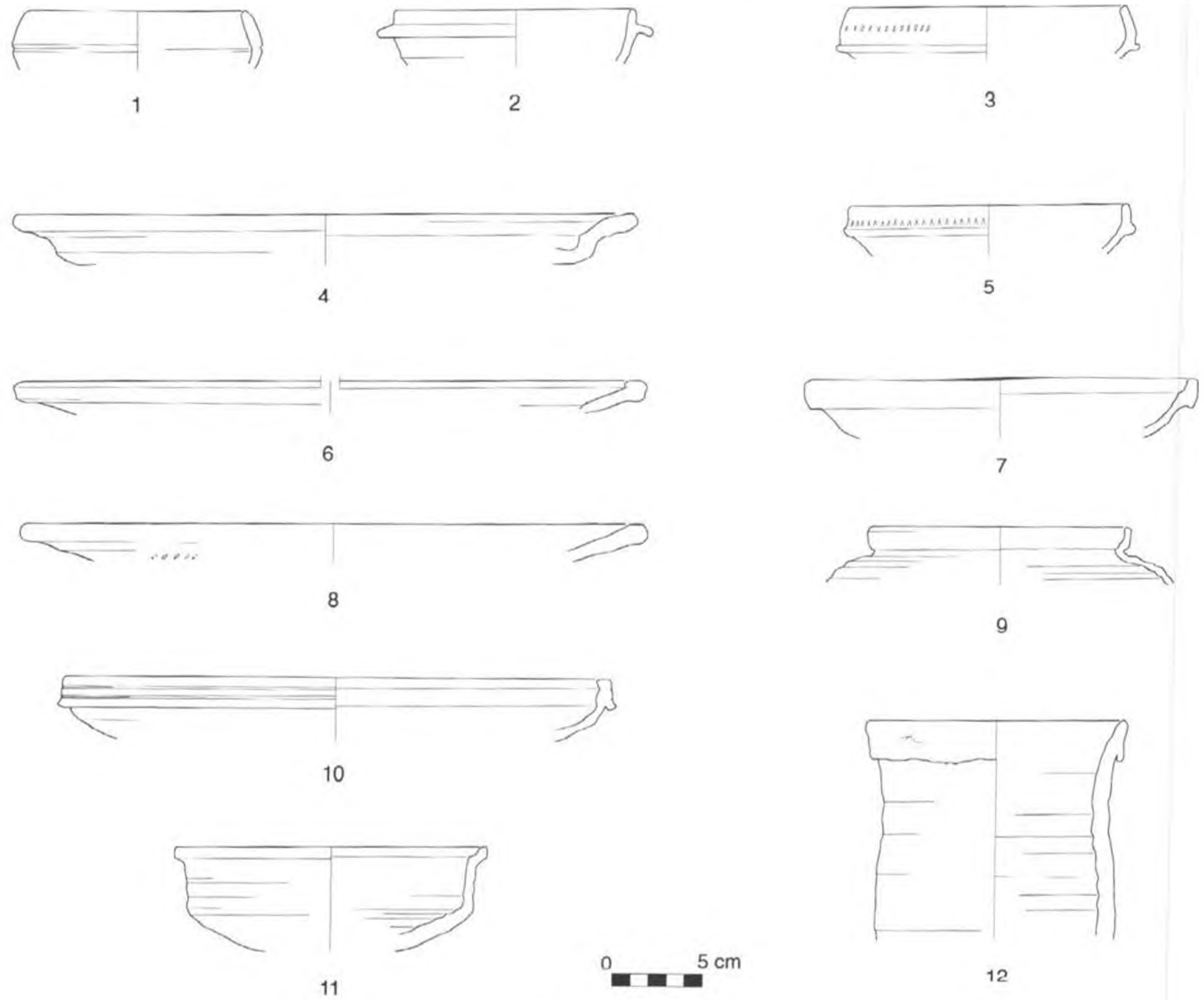

Fig. 14

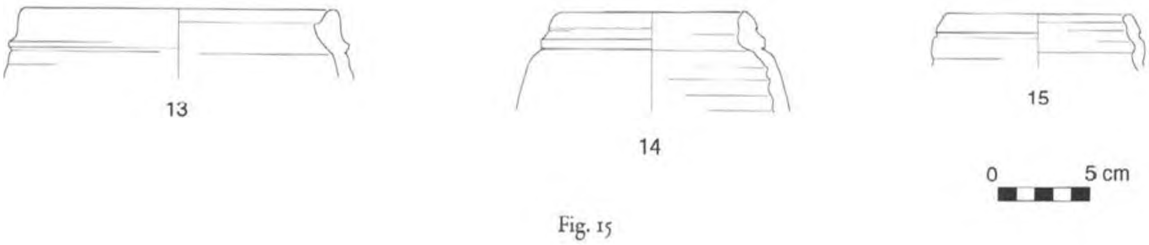

Fig. 15

of deposits clearly related to archaeological structures, it appears possible to distinguish two stratigraphic horizons in the fill covering the remains of the temple. Due to the waterlogged nature of the ground however, the limit of the two units could never be recognised during the excavation, and they have therefore to be defined in terms of artificial layers (each artificial layer corresponding to approximately 15 to 20 cm in thickness).

The superficial layers (layers 1 to 4 in most excavated areas) are composed of Late Roman/Byzantine shards, mixed in various proportions with New Kingdom and Late Period material. As usual in the Theban region, the fine wares are mainly represented by the Egyptian Red Slip Wares A (Figs. 14. 1–3, 5, 7, 10) and some white-slipped decorated wares (Figs. 14. 4, 6, 8), both produced in the Aswan area. Three body shards can be attributed to the African Red Slip Wares originating from the Central Tunisian workshops. The regional copies of these imported wares, made of red-slipped Nile clay (Egyptian Red Slip Ware B), complete the repertoire of tableware. The chronological range of these fine wares

Fig. 16

16. Convex-sided cup (inv. KHK-070). Prov.: Peristyle Court North, square 1, layer 6. Nile B2, break red brown, narrow violet core with red borders, light red slip on surface and red band on rim
17. Cup (inv. KHK-198). Prov.: Peristyle Court North, square 1, layer 7 north. Nile B2, break red brown with red core, polished red slip
18. Bowl (inv. KHK-156). Prov.: Peristyle Court South, square 1, layer 7 south. Nile B2, break red brown, interior surface smoothed, exterior surface roughly wet-smoothed
19. Handled carinate bowl (inv. KHK-090). Prov.: Peristyle Court North, square 3, layer 7. Marl A3 (?), break greenish with abundant fine decomposed limestone inclusions, abundant fine sand grits, some fine organic inclusions, surface roughly smoothed, lower part of the body trimmed
20. Short-necked jar (inv. KHK-106). Prov.: Peristyle Court North, square 2, layer 6. Nile B2, break red brown, thick cream-white slip, roughly smoothed
21. Short-necked jar (inv. KHK-138). Prov.: PWN square 31, layer 2. Nile E, break red brown, cream slip partly eroded
22. "Beer jar" (inv. KHK-080). Prov.: Peristyle Court North, square 1, layer 7. Nile B2, break red brown, surface roughly smoothed
23. Cylindrical bread mould (inv. KHK-142). Prov.: Peristyle Court North, square 42, layer 3. Nile B2, break red brown, outer surface rough, inner surface roughly smoothed
24. Cylindrical bread mould (inv. KHK-135). Prov.: Peristyle Court North, square 2, layer 2. Nile B2, break brown, outer surface rough, inner surface smoothed
25. Jar (inv. KHK-112). Prov.: Peristyle Court South, square 1, layer 7 south. Nile E, break red brown, pinkish orange slip, roughly smoothed
26. Jar (inv. KHK-200). Prov.: Peristyle Court North, square 1, layer 7. Nile E, break red brown, grey beige slip, roughly smoothed
27. Large "meat jar" (inv. KHK-085). Prov.: Peristyle Court North, square 1, layer 7. Nile E, break brown, thick yellow-cream slip on outer surface, roughly smoothed
28. "Meat jar" (inv. KHK-119). Prov.: Peristyle Court South, square 2, layer 7. Nile E, break red brown with grey core, surface smoothed
29. Amphora (inv. KHK-074). Prov.: Peristyle Court North, square 1, layer 6. Marl D, break beige orange, greenish yellow slip, roughly smoothed
30. Oasis amphora (inv. KHK-204). Prov.: PSW in front of facade. Oasis clay fabric B23, break orange with grey-bluish core
31. Oasis amphora (inv. KHK-128). Prov.: PWN square 28, layer 3. Oasis fabric type B23, break red-orange with grey core, surface grey-brown
32. Oasis amphora (inv. KHK-065). Prov.: PSW. Oasis fabric type B23, break beige-orange with more reddish borders, surface brownish

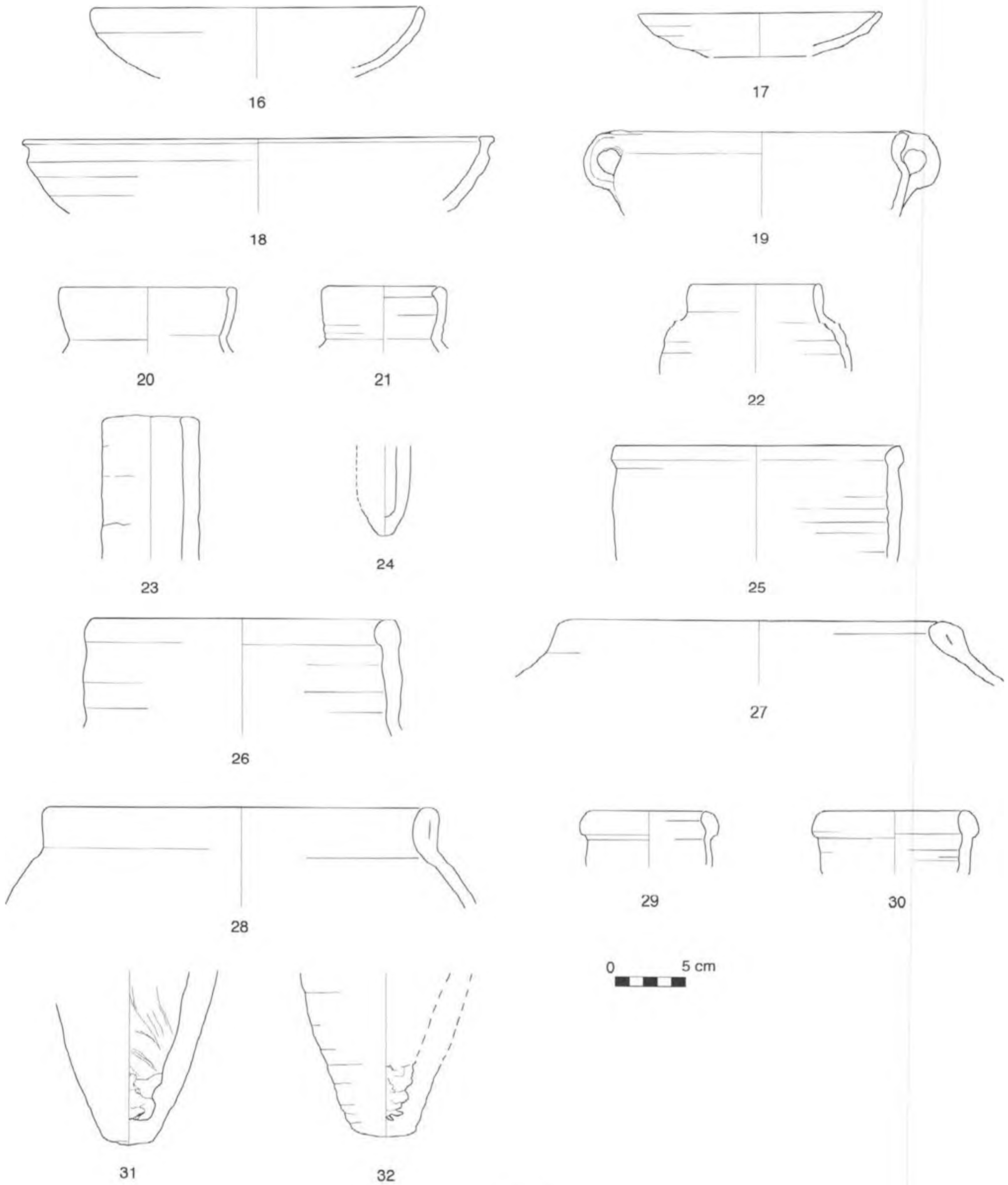

Fig. 16

suggests a 6th century AD date, with some elements probably extending into the 7th century AD[55]. Cooking pots (Figs. 14. 9, 11) are comparatively less abundant, as are storage jars. One area, corresponding to the north-western part of the Peristyle Court (PWN), yielded an unusual proportion of *qawâdîs*, or water-wheel pots (Fig. 14. 12), which possibly indicates the presence of some *saqqiyah* installation nearby.

The distinctive nature of their fabric, a Nile clay characterized by abundant decomposed limestone inclusions, and their stratigraphic position however don't exclude that they could be of more recent date, since a water-wheel was still in function on the site during the second half of the 20th century AD, located north of the Peristyle Court.

Among the residual material in these layers are a number of shards datable to the 26th Dynasty (Figs. 15. 13–15). Still, their significance should not be overestimated; because of their very specific technological and typological characteristics, even when reduced to body shards, the productions of this period are more easily identified than those of most other periods. So far, the Hellenistic and Early – Middle Roman periods are not represented.

The lower part of the stratigraphy, from layer 4 or 6 (depending on the location) down to the lowest level reached by the excavation (layer 7), corresponds to a fill which can be dated by the most recent elements to the late Ramesside Period, though the material from this horizon ranges chronologically from the mid – late 18th Dynasty onwards (Figs. 16. 16–32). Possibly this fill could be related to the Ramesside destructive activities in the funerary temple, which are attested as early as the reign of Merenptah.

Blue-painted pottery is present but rare and much probably did not survive the prolonged stay in waterlogged ground. Most of the common production is made of Nile B2 and Nile C fabrics[56]. A noticeable exception is a group of jars, usually of large size, made of sand-tempered Nile E fabric covered with a light-colored slip. They are represented by cylindrical-necked jars (Figs. 16. 25–26) and neckless 'meat jars' (Figs. 16. 27–28). Fabric Nile E is not frequent in Upper Egypt and probably originates from the Eastern Delta, where it is very common during the Ramesside Period[57]. The jars from Kom el-Hettân therefore possibly contained some goods imported from Lower Egypt. Egyptian Marl D amphorae (Fig. 16. 29) are relatively rare. More interesting is the abundance of amphora shards made of Oasis clay (Figs. 16. 30–32), which have been found in large numbers in almost every excavated square and layer from the deepest levels to the surface. Every fragment, including body shards, have been collected and recorded, amounting to a preliminary total of 252 pieces[58]. These amphorae are easily identified by their characteristic fabric and manufacturing marks. The shards usually are thick-walled, the fabric is medium to fine textured and the break is grey to red-orange often with a grey-bluish core and contains abundant inclusions of fine to coarse limestone, sand grits and red ferruginous particles[59]. Several shards present the typical deep vertical marks at the junction of the mould-made base and the central wheel turned body part (Fig. 16. 31). Until recently, these oasis amphorae have rarely been reported from New Kingdom sites, and the importance of imported goods from the oases of the Western Desert remained mainly attested by textual evidence only. Recent research in the oases themselves and in the Nile Valley showed that the apparent absence of actual oases imports in the archaeological records merely reflected the non-recognition of these productions. Kom el-Hettân clearly confirms that oasis amphorae are much more widespread in the Nile Valley, and especially in the Theban area, than previously considered[60]. Given the limited number of diagnostics, the chronology of the Kom el-Hettân examples remains difficult to ascertain; the preserved bases show close similarities with the published types from Amarna[61], while the few rims (Fig. 16. 29) find parallels in Ayn Asil (Dakhla oasis)[62]. The relative abundance of oasis amphorae stands in contrast to the extreme scarcity of Canaanite jars, another import usually found in great abundance on New Kingdom and especially Ramesside sites of the region. Only five fragments could be identified, all mixed with much later material from horizon 1 layer. Three of these belong to fabric group 3, probably originating from the region of Afula, in the central Jezreel valley[63].

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[55] Based on GEMPELER's study of the Elephantine material: R.D. GEMPELER, *Elephantine X. Die Keramik römischer bis früharabischer Zeit, AV* 43, 1992.

[56] The fabric nomenclature follows the Vienna System: H.-A. NORDSTRÖM/J. BOURRIAU, in : D. ARNOLD/J. BOURRIAU, *An Introduction to Ancient Egyptian Pottery, SDAIK* 17, 1993, pp. 168–190.

[57] D.A. ASTON, *Die Keramik des Grabungsplatzes QI. Teil 1. Corpus of Fabrics, Wares and Shapes, FoRa* 1, 1998, pp. 62–63.

[58] More fragments have been observed in several contexts excavated in 2002 which have not been sorted yet.

[59] This fabric corresponds to fabric B23 in the Dakhla Oasis Project classification, which has been recently described by C. HOPE ET AL., in: R. FRIEDMAN (ed.), *Egypt and Nubia. Gifts of the Desert*, London 2002, pp. 95–131.

L.B.

VII. COMMAP: The Mapping Project

1. Introduction

1.1 Birth of Project and Scientific Planning

An archaeological/topographical research project GeoTopoCart has been successfully carried out for many years under the direction of Franz Schubert in Bibracte on Mont Beuvray[64].

The project COMMAP (Colossi of Memnon Mapping Project) was founded as part of the research and restoration project Amenhotep III. Although long years of experience easily facilitated the organization of the group and the technical equipment as well as the scientific planning and the technical implementation, still a lot of local conditions and incalculable difficulties had to be taken into account in the planning, such as lack of knowledge of the terrain structure and the number of anomalies and building remains to be measured. Even though it seemed almost impossible to calculate the number of measuring points required and thus the extent of the survey which had to be coped with within the given span of time available, it was clear that only the most modern theodolite – the type which had proved its worth at Mont Beuvray – could be used. A complete Trimble Total Station (Trimble 5603 DR200+) was obtained free of charge for the period of the campaign in Kom el-Hettân, thanks to H. Gerner's negotiations with the firm's agency.

1.2 Aims of the Project

The aim of the project was the archaeological/topographical prospection and survey of an area, which extended in one strip of circa 150 m wide and circa 700 m long within the temple terrain. The area is situated north of the modern road and stretches from the present day parking lot at the Colossi of Memnon to the street crossing near the former Chicago House. The terrain has been the property of the Supreme Council of Antiquities for many years – it is uncultivated and to a certain extent free of vegetation. The goal of the survey was to localize all the visible antique remains of buildings and statues in the terrain as well as those accessible in present day excavations and those represented in old excavation plans. In order to achieve this it was necessary to create an exact fixed-point network, which can also be used as a basis for future excavations, geophysical investigations and architectural research. The second task to be carried out was to record and store micro-topographically the visible fine structure of the present day ground surface. Although the whole terrain seems at a glance completely flat, the experienced observer can see immediately the multiple modulates in the form of slight elevations and depressions, which often amount to only a few decimetres in the soil. These observations can sometimes give the archaeologist information about the building structures under the present soil as well as hints of old trial trenches, holes left as a result of robbery and vandalism, the exact situation of previous excavations as well as ruins of modern buildings such as houses and wells which have caused grave disturbances in the antique stratum. The final task of the survey was to produce detailed cartographical documents of all the archaeological and topographical finds in the form of exact maps.

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[60] Oasis amphorae also appear quite commonly in Deir el-Medina, in the tombs (e.g. TT 359 *cf.* G. Nagel, *La céramique du Nouvel Empire à Deir el-Médineh, DFIFAO* X, 1938, fig. 14 n°31–32) as well as in domestic contexts (pers. observ.).

[61] P. Rose, in: R. Friedman (ed.), *op. cit.*, p. 128, fig. 11.

[62] S. Marchand/P. Tallet, in: *BIFAO* 99, 1999, fig. 9.

[63] L.M.V. Smith/J. Bourriau/M. Serpico, in: *Internet Archaeology* 9 (http://intarch.ac.uk/journal/issue9/bourriau_index.html).

[64] GeoTopoCart (Programme Géodésie, Topographie et Cartographie du Mont Beuvray) is an international and interdisciplinary co-operation project between the Centre archéologique européen du Mont Beuvray and the FH Munich (university of applied sciences), which was started in 1995 to carry out the topographical research and cartographical documentation of the Celtic and Gallo-Roman *oppidum* of Bibracte.

2. The Project COMMAP

2.1 The Survey and the Methods Used

The term archaeological prospection covers all types of investigation, which try to discover indications of archaeological remains beneath the surface of the ground without disturbing the soil. The oldest and undoubtedly still most important method today is the ability to recognize by sight (with the topographical eye) the features and characteristics of relevant archaeological structures in the terrain, coupled with their later interpretation and registration. Today this method can be supported by modern high technology. Both methods together facilitate exact and relatively rapid surveys of archaeological and topographical remains, which can then be recorded in detailed cartographical documents. The topographical predictions, as well as the geophysical prospections depend essentially on conditions in the terrain – the ideal situation being that archaeological traces have not been disturbed by later intervention or buildings. Many archaeological sites offer such situations for these methods of research, above all when they are situated far away from modern civilization, but in other areas the archaeological remains have been attacked both by the physical elements (nature) and by civilization (mankind). Unfortunately, this latter situation had to be faced when dealing with the mortuary temple of Amenhotep III, in which the terrain had been disturbed in both ways – firstly, it has been continually covered and levelled by silt from the Nile over the years, so that the archaeological traces cannot be deciphered at surface level and secondly, the recurring theft and destruction of the stone monuments and sculptures since the time of antiquity, have left enormous gaps in the area under research – the topography of the terrain. The site had neither been mapped nor had any of the previous excavations been adequately measured and documented, so that a complete survey of the terrain with detailed maps in which past and present excavation results are represented was urgently required for future research.

The methods used in archaeological topographical surveys by COMMAP are based on many years of experience acquired at Mont Beuvray in Burgundy, France where ideal conditions existed for this type of prospection giving very successful results. Due to the completely different situation here in Kom el Hettân it was necessary to modify the methods used in a number of ways.

2.2 Existing Maps and Excavation Plans from H. RICKE

An exact and detailed survey of Kom el-Hettân has been a *desideratum* for quite some time, especially as plans of the neighbouring mortuary temples are available. The only overall plan of the temple showing the still visible excavated and hypothetically supplemented architectural remains, drawn up by H. RICKE and published by G. HAENY, was orientated on the axis of the temple. The published plan doesn't contain contour lines of the terrain nor does it show any indication of fixed points or of a grid of co-ordinates on which H. RICKE could have based his measurements. This plan has remained in use by the actual mission, with the addition of the course of the modern road, which cuts through the temple area.

Earlier series of English archaeological maps contain many sheets of Thebes West but the area of the mortuary temple of Amenhotep III is absent. The available maps of the Egyptian land registry for this area show only field boundaries and canals but unfortunately, neither fixed points nor information regarding the co-ordinates. RICKE's excavation plans are also orientated towards the axis of the Peristyle Court. The latter has been inserted into his plans but symbols for fixed points and information regarding a co-ordinate system are absent. As a result the excavation finds from these plans can only be localized and inserted into the survey maps with the help of identical building remains.

2.3 Previous Co-ordinate Systems

Up to now, excavations and investigations had been measured in different systems, and it was necessary to establish a new local co-ordinate system which would be compatible with all previous systems and usable for all future excavation plans.

One co-ordinate system (I) was orientated on a measuring line drawn by the American surveyor WILLIAM GORDON in 1999. This measuring line runs at an inclination to the temple axis from the fixed point MEM 1 northeast of the Colossi of Memnon to the fixed point MEM 4 in the Peristyle Court. It runs at an inclination of 2.47° to the temple axis. It has been preserved up to today and is marked by an iron rod embedded in cement.

A second system (II) orientated towards the temple axis was used in RICKE's excavation plans and maintained in the Peristyle Court by G. HEINDL, who took his point 21, which lies in the Peristyle Court, as the origin for his co-ordinate system. This resulted in the x and y co-ordinates having positive and negative values, which were not always inserted in his measurements.

A third system (III) with an orientation which deviates 1.85° from the measuring line MEM 1 to MEM 4, was used in the West Portico of the Peristyle Court by G. HEINDL. The origin of this system is the point A3 north of the zero point No. 21 of the above-mentioned system II.

2.4 Newly Established Local Co-ordinate System

As a basis for this new survey it was intended – in agreement with the main project director – to use the existing co-ordinate system (II) taken from previous excavations, but it was found necessary to check and adjust this system first. This system is orientated towards the exact axis which runs through the centre between both the Colossi of Memnon and the entrance of the Peristyle Court. One problem with this co-ordinate system was that the zero point lay on the axis within the Peristyle Court and this resulted in the x and y co-ordinates having a positive and a negative value – which is not only unpractical but can also lead to mistakes. For this reason it was decided to replace the old system II by a new system in which the co-ordinates x = 0 m and y = 0 m of the zero point (old system) were replaced by the co-ordinates x = N1000 m and y = W1000 m (new system). This change meant that 1000 m had to be added to all previous measurements taken from the old system II. Earlier measurements, co-ordinate data and excavation plans, which had been based on different orientation systems, have already been transformed.

The advantage of having only one co-ordinate system based on the main axis of the architectural finds offered, through the simplicity of its application, the best conditions not only for the survey but also for the measurements of all previous and future archaeological results.

2.5 Archaeological-topographical Prospection and Coding of the Measuring Points According to their Classification

A prerequisite for archaeological prospection and survey in the terrain is that the measuring points recorded (the sum of which in this campaign amounted to circa 10,000 points) have to be selected according to variable criteria. In the survey methods used here, all the recorded measuring points had an automatic registration number. Each point was also given a code number, which showed its classification within the survey. These codes were taken from a coding system which had been divided into 10 sections of criteria, with each section being further sub-divided into ten numbers representing archaeological traces and relevant features in the terrain. For example: No. 166 = architectural remains from an excavation, column base, material: sandstone. No. 82 – old measuring fixed point from a previous survey. During the daily fieldwork the archaeologist selected the relevant points in the terrain, each of which was clearly marked with a coloured sign (in this case a red plastic disc was used), which enabled the technicians to register the point – one marked the point with the prism rod and the other measured and recorded the point on the theodolite. The related code number of each point was given to the survey technicians by the archaeologist, so that it could be recorded simultaneously by the measuring instrument. All these numbers were stored together with their related co-ordinates in a data bank for use in the processing of the maps and later in future excavations.

2.6 Demarcation of the Selected Terrain

The survey was carried out on a strip of uncultivated land circa 700 m long and 150 m wide, the property of the Supreme Council of Antiquities – made available for unlimited research. The modern road embankment, including the whole width of the road, was measured in the southern and western side of the terrain. A small strip of ground at the edge of the cultivated land was measured in the north and east. The only area measured within the cultivated fields was in the northwest, where an area of circa 1 ha around the overturned Colossi at the northern gate of the temple was measured and later integrated in the co-ordinate system of the survey.

Although the complete temple with its estimated dimensions of 500 m x 700 m extends into the cultivated fields on both sides of the central research area, observations carried out in these latter areas showed no visible terrain anomalies (except for a few small finds), which may suggest suspected building remains. A micro-topographical or even an extensive survey would only be worthwhile if it could be coupled with a spacious geophysical investigation. In a survey alone only the present day dominant ground structures of the surface would emerge, such as the curved edges of the boundaries separating the fields and the depression of the canals.

3. Technical Equipment and Progress of the Survey

3.1 Only One Single Instrument a "Trimble 5603 DR200+ Total Station" Was Used in the Field-work During the Whole Survey

The following is a short account of how it functions: The "Trimble 5603" is made up of two units – a special type of theodolite which is combined with a range finder installation and secondly, a unit fitted out with a prism which is capable of reflecting in a circle i.e. eight small reflector prisms are set around the standing axis of a perpendicular rod. This makes it possible to measure quickly without having to bother about whether the prism is exactly directed at the theodolite or not. The working of the range finder installation is based on the transit time measurement of the light. In this case near infrared light (c.740 nm wavelength) is used.

A further peculiarity of the theodolite used here is the extremely quick way in which distance can be measured. Whereas the first suitable range finder to be used in the field 20 years ago needed 20 minutes to record one measurement, in this case just about 0.4 seconds is required for a similar measurement.

Anyone who has ever used a levelling instrument or a theodolite before knows that it takes a lot of time to exactly set the point or target (reflector) to be measured. Here the real strength of this instrument lies in the so-called robotic installation, which makes it possible for the prism to be followed during the whole measuring process. One has only to look through the theodolite telescope to see that the prism virtually 'sticks' to the middle of the filament. The motion axis is motorized and that makes it possible for the prism to be automatically followed. In this way procedures which predict movements occur such as algorithms which facilitate the target being quickly found again, if the contact happens to be broken, for example by visibility hindrance.

In order for this procedure to function in a reliable way, the manufacturers of this technical equipment work with a so-called 'active prism'. Such 'active prisms' send out infrared light themselves, which is then received by a second optical unit set beneath and parallel to the normal theodolite telescope. This procedure has the advantage that it is less susceptible to disturbances.

3.2 Chronological and Spatial Development

It was decided to begin the survey of the temple area at the modern parking lot in the east near the Colossi of Memnon. It appeared to be a good place to start as the topography and the building remains of this section seemed the simplest to interpret. All the new measurements had to start from the old measuring base (situated oblique to the temple axis), on which the earlier fixed points had been preserved and set at intervals as far as the Peristyle Court. The direction of the temple axis had to be newly defined and measured before the present fixed points could be set and cemented in place – this wasn't possible until the end of the survey. Later all the previous co-ordinates had to be transformed with reference to the newly defined temple axis. The normal distance between the marked measuring points amounted to between 2 m and 4 m depending on the structure of the terrain. In dealing with building and sculpture remains it was necessary to select considerably shorter distances. The survey moved from east to west during the daily fixed work schedule.

The survey and exact measurement of the architectural remains of columns, cobbles and sculptures in the area of the Peristyle Court was very labour-intensive and time consuming. But this was extremely necessary, as it was intended that all these new precise measurements be used as a basis for the exact insertion into the maps of old and new remains from the past, present and future excavations.

Later the survey was stretched to the limited area around the Colossi at the northern gate. Only at the end of the survey were the conditions established for defining and marking the complete length of the temple axis. The fixed points consisted of iron rods, which were cemented deeply into the ground. They form the basis of the new co-ordinate system in which all the survey data has been registered. Apart from the fieldwork during the day, the information registered during the survey by the theodolite had to be continually stored in a data bank in the computer every evening.

3.3 Printing of the Provisional Contour Line Maps to the Scale of 1:300 and 1:1000

As large computer facilities and large size plotters, which are required for the final maps, could not be transported to Egypt, provisional contour-line maps were printed in sections to a scale of 1:300 and 1:1000 and afterwards stuck together in order to give the excavation team an idea of the end result.

4. Final Analysis of the Survey and Processing of the Maps

4.1 Analysis and Evaluation of the Survey Within the Framework of the Joint Thesis

The evaluation of the survey data and the related calculations could only begin after the return visit to Germany. The FH Deggendorf supplied the necessary hard- and software. The two students F. Gessler and M. Sogerer undertook, apart from their thesis for a civil engineering degree, the processing of the archaeological maps and were supported by H. Gerner. The maps are based on the evaluated results and the cartographical layout from Franz Schubert. The latter prepared the old and new excavation plans, containing ground plans and building remains, set them together and had them inserted into the maps according to his precise instructions.

4.2 Insertion of Previous and Recent Excavation Finds

In order to localize the ground plans of all the excavation plans exactly, it was necessary to have the visible building remains measured anew as previously mentioned. The excavation documents, which have recently been scanned in the Leibniz Rechenzentrum in Munich, could as a result of identical contours, be inserted exactly into the maps. In this way the earlier ground plan reconstructions can be checked.

4.3 Design, Scale and Positioning of the Archaeological Maps

A series of four archaeological maps from Kom el-Hettân were planned and prepared:

Map 1:500, 3 sheets, format 500 x 800 mm
  Sheet 1: Co-ordinates (y) = W850 – W1200 m / (x) = N950 – N1100 m*
  Sheet 2: Co-ordinates (y) = W500 – W850 m / (x) = N950 – N1100 m*
  Sheet 4: Co-ordinates (y) = W1105 – W1195 m / (x) = N1320 – N1395 m*
  Sheet 4 (Northern gate) included within Sheet 1.
Map 1:250, 1 sheet, format 540 x 800 mm
  Sheet 3: Co-ordinates (y) = W900 – W1050 m / (x) = N955 – N1060 m

*The y-axis in the maps is orientated to the west and the x-axis to the north.

4.4 Layout and Contents of the Maps

All the maps have identical layout, contents, and the same cartographical and archaeological information:

Frames with the local co-ordinates of the temple of Amenhotep III

Legend with imprint, scale, archaeological and general information

Contour lines in brown colour

Outlines of depressions and elevations in the terrain as well as demarcation of excavation sondages in green colour

Archaeological excavation results in black colour

Hypothetical archaeological additions in purple colour

Modern roads and buildings in grey colour

4.5 Archaeological Results of the COMMAP Survey

The results of the project COMMAP consist of a set of four archaeological topographical maps to the scale of 1:500 and 1:250. They show a detailed topographical picture of the geomorphology of the terrain including all modern intervention and change

The anomalies in the terrain are represented objectively and an impression of three-dimensionality is created by using closely set contour lines. The equidistance of 0.05 m was selected for the intervals between the contour lines and the 0.5 m and 1 m lines were emphasised in a dark brown colour. Except for the dominant slope of the modern road in the south and the canals in the north, the multiple anomalies of the hill of Kom el-Hettân, which gave this locality its name, can clearly be seen and have already been drawn into the plan of the temple terrain by WILKINSON in the year 1835.

The greater part of the ancient surface of the terrain has been completely covered to a depth of ca. 1 m – 2.5 m by mud from the river Nile – the silt increasing in depth from west to east. This means that all the visible remains in this terrain are post-ancient in date i.e. that they are modern and thus unable to give information about the archaeological finds underneath. On the other hand the structures, which become visible in the picture produced by the contour lines can show exact indications of the disturbances which resulted from the intervention of civilisation, such as wells, canals and building remains.

What is more valuable for archaeology is that this topographical representation of the terrain enables every single site or object to be localised, such as older excavations which have been carried out since the beginning of the 19th century, as well as the systematic investigations which took place at a later date. It can also give information of locations from where finds, now scattered all over the world, might have been extracted and bring to the attention of the future excavators the existing disturbances of the stratification.

Further results concern the exact measurement and representation of all the excavated monumental remains, which are available above ground. The position of the two Memnon Colossi, the colossi in front of the Second and Third Pylon, as well as that in front of the assumed North Gate, are graphically represented exactly on the map and stored in the computer data with the co-ordinates of a lot of measuring points. They also make it possible to give the exact measurements between various places and the exact distances the accurate position of any one particular place.

Through the detailed measurements of the whole area surrounding the toppled, overturned Colossi, it has been possible to document the exact direction in which each one fell after the earthquake, as well as making it possible to carry out a new research into the probable epicentre of the earthquake.

The basis for the insertion and representation of the building remains in the maps was a complete new survey of all the available architectural remains and excavations of the past years. The insertion alone of the previous excavation drawings according to their fixed points was not sufficient. That meant that the old excavation drawings had to be scanned first and then inserted into the new survey, using the outlines of the bases of columns, as well as the outline of pavement stones, the corners of walls etc. In this way it was possible to integrate the total number of finds from previous excavations, which are now partly covered with sand, flooded by ground water or completely covered. These insertions can be found in Map Nr. 3 made to the scale of 1:250. This map is ready but is being published within Map Nr. 1 to a scale of 1:500.

The insertion of the excavation plans from H. RICKE was closely tied to the reconstruction of the Peristyle Court and the Hypostyle Hall. As the published plan contains only a short scale at the edge and no co-ordinate grid with accompanying measurements, the excavation could only be inserted with reference to the bases of the columns in his plan which coincided with the measured bases in our plan. An exact measurement of the Peristyle Court is closely connected to metrological investigations and questions. RICKE himself had already observed that the axis distance of the columns in the east-west direction amounted to 10 cubits, in the north-south direction to 9 cubits and 3 palms, but unfortunately he did not mention which particular Egyptian cubit measurement system he had used as a basis for his measurement[65].

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[65] H. RICKE, in: *BÄBA* 11, p. 27.

Because the building remains of the mortuary temple of Amenhotep III have been open to a lot of destruction over time, the extreme weathering of the sandstone as well as movements resulting from earthquakes, it is not suitable for carrying out a metrological discussion to determine the length of the measurement unit used. The distance between the identifiable centre of one column to the centre of the next column of the Peristyle Court show repeated indications that the length of the cubit used measured ca. 524 mm[66], and thus a valuable starting point for the probability and the precision of the reconstruction.

Among the extensive literature dealing with Egyptian metrology from the time of NEWTON[67] till today, the work of LEPSIUS[68] can still be regarded as the basic work on the Egyptian cubit. His work contains lists and descriptions of the preserved original scale known at that time. The following are some examples of the cubit measurements with the length and origin according to LEPSIUS. Cubit of Amenemopet, wood (Memphis) 0.5235 m; cubit of Maia, wood (Memphis) 0.523 /0.525 m, a double cubit in the form of a wooden rod 1.048902 m (thus 1 cubit = 524.45 mm), which is supposed to have been found in the masonry of the Pylon of Horus at Karnak and is now in the British Museum[69]

I would also like to mention the compendium type work by E. PFEIFFER[70] from the more recent metrological literature, in which the measurement of the above mentioned cubit of Amenemopet as well as the cubit covered with gold leaf found in the grave of the builder Kha are given as 523.858 mm[71].

This exact survey of both the complete and the fragmented preserved column bases, together with the above metrological reflections, lead to a reconstruction of the Peristyle Court – the type suggested previously by RICKE. It can be assumed that the 16 columns, with a uniform distance measuring 10 cubits from centre to centre, were situated at the northern and southern side, whereas on the eastern and western side the uniform distance was shortened to 9 3/7 cubits in order to leave a width of 8 cubits between the column bases for the passage through the centre. This observation contradicts the fact that the Peristyle Court had a passage running in a north-south direction. A right angled axis running in a north-south direction from the North Gate meets the temple axis at W1045.

Temporary observations suggest that the temple area was systematically planned. It can be seen that the distance from the outer front edge of the Memnon Colossi to the entrance of the Peristyle Court measures 650 cubits, which equals the distance from the temple axis to the position of the assumed wall of the North Gate. Apart from that, the distance from the above mentioned edge of the Memnon Colossi to the colossi in front of the Third Pylon amounts to 400 cubits.

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[66] It is not possible to calculate from the building measurements an exact value for the cubit used in the mortuary temple of Amenhotep III. This value seems to lie between 523 mm – 525 mm according to the following literature (see footnotes nr. 67 to 71.) The same length, 524 mm, is mentioned for the royal cubit by W. FL. PETRIE, *Measures and Weights*, London 1934, p. 3.

[67] NEWTON calculated 1,719 Eng. feet – 523.95 mm (converted by HULTSCH). from the dimensions of the King's Chamber in the Great Pyramid of Memphis, 524.144 mm (converted by LEPSIUS): I. NEWTON, *Dissertatio de sacro Iudaeorum cubito ect.*, in: *Opusc. math. philos. et philol.* III, p. 495.

[68] H. LEPSIUS, *Die altägyptische Elle und ihre Eintheilung*, Phil. u. hist. Abhandlungen der k. Akademie der Wissenschaften zu Berlin, 1865, p. 1ff.; see especially p. 14ff. and pl. 1. He calculated a length of 525 mm for this cubit. See also: H. LEPSIUS, *Die Längenmaße der Alten*. in: *Sitzungsberichte d. k. Preußischen Akademie der Wissenschaften* 46, 1893, p. 1195ff.

[69] LEPSIUS believed in the authenticity of the rod but according to S. BIRCH, he doubted the authenticity of its division into 2 x 7 = 14 palms.

[70] E. PFEIFFER, *Die alten Längen- und Flächenmaße. Ihr Ursprung, geometrische Darstellungen und arithmetische Werte*, St. Katharinen 1986; see under „Elle, ägyptische".

[71] PFEIFFER (see footnote 70) pl. 4,2 Egyptian Museum Turin (nr. 6347) and pl. 4,2 (nr. 8647) – in pl. 14, she also mentioned a 'Klappholzelle' (nr. 8391) from the grave of Kha showing a length of 524.923 mm.

It can thus be assumed that a unit measuring 100 cubits was used. This is understandable in that the Arura, the smallest Egyptian unit of square measures, has a side measuring 100 cubits[72].

The authors would like to thank the SCA, the project director and team members for their kindness and help during our four weeks' stay at Kom el-Hettân. We would especially like to thank Dr. Ing. Joseph Dorner for his knowledge and continual help in localising the old measuring systems, as well as Kent Weeks, director of the TMP mapping project, for invaluable help and information; the Fachhochschule, Deggendorf for its co-operation; the Siller company in Weiden, Bavaria, for the complete Trimble 5603 DR 200+ Total Station; J. Gerner for making this contact, and all members of our team.
F.S./M.S.

VIII. Weeds in Archaeological Sites [Excerpts]

The existence of weeds in open archaeological sites throughout Egypt causes serious damage to the monuments. Moreover, excavation and conservation work on infested sites is very difficult. To face this dangerous problem we studied the reasons for the persistence of the weeds and their resistance to all methods of mechanical control. We performed a survey to identify and classify the destructive weed species on archaeological sites. We recorded the various damages done by weeds on monuments built in stone, as well as in mud bricks. The study resulted in the selection of a chemical method to control the weeds on archaeological sites, after first experiments were made in Medinet Habu.

Weeds include all wild plants and consist of herbs, shrubs or trees. They show adaptability to a wide range of soil environment. They grow on agricultural land, as well as in desert or aquatic environments. They are classified as follows:

1. Annual weeds, with one season existence (winter or summer annual), which reproduce by means of seeds (sexual reproduction).
2. Perennial weeds, with a life extending for three years or more. Simple perennials reproduce by means of seeds only (sexual reproduction), whereas creeping perennials propagate by means of vegetative plant propagule, such as underground stems – rhizomes, tubers and bubbles (unisexual or vegetative reproduction). However, they are also capable of reproduction by means of seeds.

Weeds are very persistent plants and resist all mechanical control methods. The reasons for their persistence are numerous. Some weed species can adapt and grow in soils of low fertility and can even persist in very dry conditions. Both the above and underground parts of weeds can resist severe changes in temperature of atmosphere and soils. Tolerance to shading is a major adaptation that enables weeds to persist. The prolific seed production and dissemination are major factors for survival and persistence – the seeds are small and light, and provided with structures for long distance wind dissemination; they are covered with an oily thin film which enables them to remain viable after being in water for a long time, and protects them from being digested by animals which feed on weeds. The creeping perennials are the most persistent and resistant weed species. They are characterized by deep root systems and underground stems, which extend to depths of several metres below the soil surface layer. Their rhizomes contain numerous dormant buds, by which they regenerate and compensate the lost plants. They have ability to store food materials in the tissues of the underground parts specially the rhizomes. They propagate through rhizomes which have abundant buds (available and dormant buds), and can regenerate even by a small piece of rhizome. They have the adaptability to a wide variety of climates and range of different soils, physical character such as PH, moisture and temperature. Seeds' dormancy is an important factor of persistence: when the environmental condition of both the atmosphere and the soil are unfavorable for germination, the seeds can remain dormant for a long time.

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[72] A detailed description of the ancient measuring systems can be found in an unpublished manuscript by August Oxé, *Ägypten, die Wiege antiker Maße und Gewichte. Eine metrologische und kulturgeschichtliche Untersuchung.*

The creeping perennial weeds are the most destructive and dangerous species of weeds. The six most common species are: the Congon grass (*Imperate Cylindrica*), the *halfa* grass (*Desmostrachya bipinnate*), giant reed (*Arondo donax L.*) and the common reed (*Phragmites australis*), all four of the family of *Gramineae*; the thorn (*Alhagi maurorum*, family: *Leguminoseae*) and the nut grass (*Cyperus rotundus L.*, family: *Cyperaceae*). The most dominant weed species in archaeological sites are the congon grass, the *halfa* grass, and the thorn, which either share the same moist area or exist separately, the latter can endure drought and low fertility soil level. The giant and the common reeds are abundant in sacred lakes and exist on sites where the underground water level is high and in waterlogged ground.

The weeds cover the surface of the archaeological sites completely and conceal not only the morphology of the terrain but also hide the archaeological remains. Both the underground and the upper parts of the weeds have a harmful action on the monuments. The underground parts (rhizomes and roots) cause serious damage to the monuments that are partially or completely buried under the ground level. But also the stone structures above ground level (limestone, sandstone and granite) are threatened since weeds are capable of penetrating and growing through narrow cracks, voids, and even tiny pores in the stone blocks, and in time, these cracks and voids become fractures, and in severe cases weeds cause complete fragmentation of the weak eroded stones. Further, the weeds penetrate and grow through the spaces between the stones thus affecting the stability of the masonry. Particularly threatened are the fragile mud-brick structures. The leaves cover their surfaces while the rhizomes and roots grow inside the material forming a net of compact tiny branches. The material is further weakened, in that it provides nutrition for the weeds in the form of calcium and phosphorus, thus causing the complete destruction of the structure.

The ideal method for controlling the weeds has not yet been discovered. Since the mechanical methods have failed to eliminate the weeds, we have tried the chemical method, which is based on applying herbicides to kill and eradicate the weeds. During experiments performed since 1990 in Medinet Habu, several types of herbicides were tested, as well as different methods of application on plants by spraying, and on soil by spraying or injection. The season and the time needed to eradicate the infested sites were determined and eventually the most effective and safe herbicides were chosen. The proper kinds of herbicides to be used on an archaeological site appeared to be the non-selective systemic (translocated) herbicides, which belong to aliphathic acids compounds. We found that the Glyphosate [N- (phosphonomethyl) Glycine] is the most effective herbicide for both annual and perennial weeds, and that the best way of application is by foliar direct spraying on the mature weeds.

S.E.

IX. Diagnostic hydrogéologique. Premières investigations

1. Objectifs de la démarche

Après plusieurs campagnes de fouille, la Mission de Kom el-Hettân a mis au jour une partie des vestiges du temple funéraire d'Aménophis III. Les archéologues et les restaurateurs ont été très rapidement confrontés à une dégradation des bases en grès et en calcaires tendres. L'altération de la pierre se manifeste par une desquamation et par un effritement, lesquels sont apparemment liés aux conditions de sols humides et à la présence de sels sur l'ensemble du site d'étude.

Pour pouvoir appliquer une solution curative, les restaurateurs souhaitent bloquer le processus de dégradation et la mission Kom el-Hettân cherche une solution technique pour lutter contre la remontée des sels. Cette solution doit être efficace à long terme, au-delà de la période de fouille, puisque les autorités égyptiennes envisagent l'ouverture du temple au tourisme.

Le diagnostic hydrogéologique que constitue ce rapport a été réalisé du 5 au 11 janvier 2003. Le régime moderne des eaux est manifestement différent de celui qui prévalait avant l'inauguration du barrage d'Assouan et les conditions connues à cet endroit de la vallée, depuis l'antiquité, ne permettaient pas l'apparition des sels dans une telle proportion. Quant aux crues du Nil, elles n'avaient pas l'effet mobilisateur des sels initié par la conjonction des pratiques agricoles et de l'irrigation modernes. Un rapide constat permet de conclure que le moteur des remontées salines est lié au régime moderne des écoulements. C'est pourquoi nos observations ont été focalisées sur l'état présent des écoulements afin de proposer les principes d'un dispositif curatif et régulateur à long terme.

1.1 Restauration et lutte contre la dégradation saline

Le phénomène est lié à la formation de sels hygroscopiques sur les surfaces d'évaporation. Dans les pierres constituées par un matériau poreux et relativement peu cohérent, les sels provoquent des tensions à l'échelle granulaire, lesquelles désolidarisent les particules de la pierre. Les sels hygroscopiques ont la propriété de migrer en fonction de l'humidité du sol et de l'air. Lorsque les pierres affleurent du sol, la migration à lieu vers la surface des pierres. Elle est continue et produit en permanence des cycles de tension relâchement. Le phénomène de tension touche peu les roches ayant acquis une imperméabilité au cours de leur formation. Le ciment siliceux des quartzites vraies et des « quartzites » du Nord (grès poudingue à ciment siliceux) fait que ces matériaux sont moins sensibles à ce type d'altération. Cela vaut également pour la granodiorite et pour le granite d'Assouan. La zone la plus sensible de Kom el-Hettân est le cœur du temple funéraire: dallage et colonnes des péristyles et hypostyles.

Les restaurateurs ont compris que le stockage des pièces vulnérables devait se faire en les isolant du sol. Cet entreposage vaut pour la période de reconstitution des statues et parties du monument. Mais il faut dès à présent préparer la phase de restauration des parties non relevables (bases des colonnes, dallage, rampe, etc.), lesquelles sont présentes dans la cour à péristyle et dans la salle hypostyle. Cette phase de restauration ne pourra pas avoir lieu tant que les pièces resteront humides et soumises aux remontées cycliques de la nappe. En attendant, il a été recommandé à la mission de laisser les vestiges le moins possible à l'affleurement en les couvrant de sable. Ainsi, les sels ne se cristallisent plus dans les pierres, mais à la surface du sable.

1.2 Caractérisation des phénomènes

Sur l'emprise du chantier de Kom el-Hettân, les effets de l'irrigation pratiquée dans les champs voisins font remonter la nappe jusqu'à proximité de la surface. Ceci provoque l'engorgement du sol et entraîne une salinisation secondaire quand les eaux souterraines ramènent vers la surface des sels dissous provenant des couches inférieures.

Beaucoup de facteurs influent sur la salinité du sol, y compris la qualité et la profondeur de la nappe, les caractéristiques physiques du sol, les pratiques d'irrigation et l'absence de drainage artificiel à Kom el-Hettân. En effet, dans un système où la capacité de drainage est réduite, un excédent d'eau conduit à une sursaturation du sol en sels, lesquels se concentrent à la surface par évaporation.

Les services égyptiens d'agronomie ont eu à combattre cette salinisation dans les champs du secteur en adoptant la solution du drainage, tel que nous l'avons observé dans les parcelles situées au Nord-Est des Colosses de Memnon. D'autres observations suivent. Elles sont nécessaires pour apprécier la situation et envisager cette solution du drainage, laquelle a au moins l'avantage d'être une technique connue des autorités.

2. Conditions d'intervention

2.1 Période d'intervention

Les premiers jours d'observation (du 5 au 8 janvier) ont coïncidé avec la fin d'une période sans irrigation dans le secteur de Kom el-Hettân. Nous avons constaté une reprise de l'irrigation le 9 et ses effets suivis jusqu'au 11 janvier, date de notre départ. Nous avons donc pu constater la réaction de la nappe sous le site de fouille.

2.2 Moyens d'intervention

La mission archéologique a mis à notre disposition des moyens de nivellement qui nous ont permis de très vite enregistrer les niveaux bas sous et autour du site. Les mesures répétées quelques jours plus tard sont démonstratives.

2.3 Rencontres et visites

Les relations entre les missions archéologiques et avec les autorités égyptiennes ont pu être profitables à notre recherche d'information sur les conditions du milieu, sur les dégradations et sur les actions qui ont pu être menées ailleurs.

Les phénomènes et leurs causes telles que nous les avons constatés à Kom el-Hettân existent également sur les monuments les plus proches. A Médinet Habou, la base des murs du temple des Thoutmosides était humide, les remontées capillaires de sels altèrent les peintures. L'équipe américaine procédait à l'extraction des sels dans une démarche qui nous est apparu sans fin. En effet, la nappe se trouvait entre 1 et 2 mètres de profondeur (lac sacré voisin), à un niveau qui n'était probablement pas le plus haut de l'année. Au Ramesseum, la nappe affleurait au pied du pylône dont les pierres humides étaient marquées par l'altération saline.

En revanche, sur l'autre rive, à Karnak, nous avons pu constater que la construction des égouts avait eu pour effet un rabattement de nappe. Les fouilles en cours, où nous avons été admis, montraient la présence de sédiments sablonneux sous les constructions du temple. Ces sols légèrement humides ne présentaient cependant aucune efflorescence de sels. Nous savons que le site de Karnak a fait l'objet d'une étude hydrogéologique (présence d'un doublet de piézomètres non loin du musée de plein air). Toutefois, nous n'avons pas eu la possibilité de connaître la profondeur de la nappe par rapport à la base des constructions, ni de consulter les études pour apprécier l'amélioration en comparant la situation actuelle de la nappe par rapport à la période antérieure. Le descriptif du dispositif des égouts manque également pour comprendre son efficacité. Notons que le temple de Karnak a un fonctionnement hydraulique particulier puisque le lac sacré doit être périodiquement alimenté en eau du Nil. Evaporation et fuites contribuent à le vider. On retiendra que les fuites sous le lac et le drainage autour du temple interviennent pour entretenir une circulation d'eau sous le temple. Il est probable que ce fonctionnement est à l'origine de l'humidité du sol constaté en fouille et qu'il limite l'efficacité du drainage.

Une entrevue avec M. Ayaad Thabet du service de l'irrigation nous a permis de comprendre le fonctionnement du système d'irrigation installé autour du site de Kom el-Hettân et de discuter de la possibilité de drainer la nappe sous ce dernier. Une telle solution semble recevable de la part de cette administration.

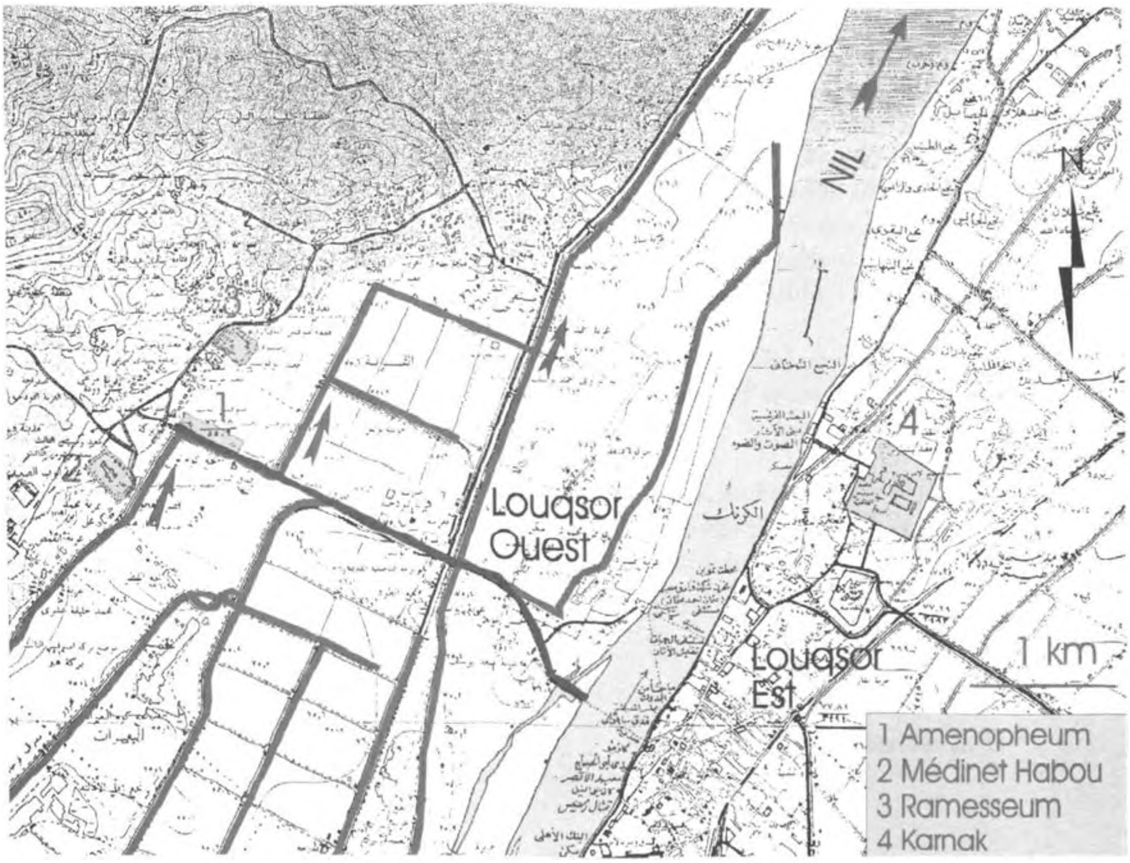

Fig. 17 Position du site de Kom el-Hettân à Louqsor Ouest

3. Observations

3.1 A l'échelle de la vallée et de Louqsor Ouest

3.1.1 Topographie

La topographie transversale de la plaine alluviale du Nil est marquée par le phénomène d'accumulation sédimentaire de part et d'autre des rives du fleuve au courts des phases d'inondation qui appartiennent désormais au passé. Le résultat est que l'altitude au sol décroît depuis la rive vers les bords de la vallée. Le site de Kom el-Hettân, placé en limite de la plaine alluviale, se trouve donc être un point relativement bas.

3.1.2 Niveau de la nappe alluviale

La nappe alluviale est une nappe libre dont le niveau ne varie désormais plus seulement en fonction du niveau du Nil, mais aussi en fonction du niveau de l'eau dans les canaux d'irrigation latéraux au Nil. Le fleuve et les canaux ont des cotes hydrauliques hautes par rapport à la nappe alluviale qu'ils contribuent à recharger et à faire remonter. La profondeur de la nappe alluviale par rapport au sol est généralement plus importante au milieu de la vallée que sur les côtés. Ceci explique pourquoi la nappe est sub-affleurante à Kom el-Hettân.

3.1.3 Gestion des eaux

La position des canaux sur cette rive du Nil est indiquée sur la figure 18. Un canal majeur longe le site au Sud de la route de Louqsor. Le canal est à cet endroit souterrain. A l'intérieur, le niveau d'eau varie en fonction de l'ouverture des vannes par le service de l'irrigation. Le canal redevient aérien à 300 mètres à l'Est des Colosses de Memnon et son altitude vers le Nord-Est. Des dispositifs de pompage dans ce canal ont été vus immédiatement au sud de la route (au droit du deuxième pylône), ainsi qu'à 300 mètres à l'Est des Colosses. Le relevage contribue à alimenter les fossés secondaires au niveau des champs. C'est un de ces fossés qui a été utilisé comme exutoire du chantier de dégagement du colosse couché. Ce rejet favorise l'infiltration sous le fossé et la remontée de la nappe alluviale sous le site de fouille.

Etant donné le relativement bon état de la végétation et des sols dans les champs visités au Nord-Est des Colosses, nous constatons que les drains mis en place par le service de l'irrigation agissent efficacement contre la salinisation.

3.1.4 Situation des monuments

Les monuments de Médinet Habou et de Kom el-Hettân sont voisins du canal majeur dont l'utilisation agricole contribue à la remontée de la nappe, à la salinisation des terrains et à l'altération de certains vestiges. Le site du Ramesseum est plus éloigné du canal, mais il se trouve en bordure d'un secteur agricole irrigué et mal drainé.

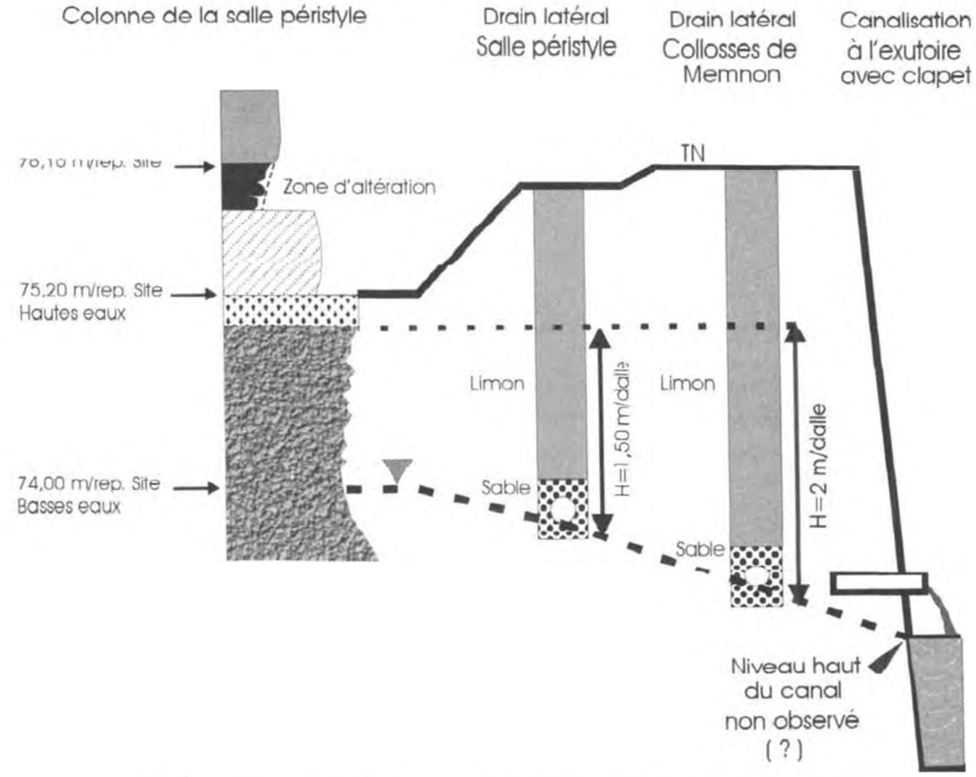
Colonne de la salle péristyle
Drain latéral Salle péristyle
Drain latéral Collosses de Memnon
Canalisation à l'exutoire avec clapet
76,10 m/rep. Site
Zone d'altération
TN
75,20 m/rep. Site Hautes eaux
Limon
H=1,50 m/dalle
Limon
H=2 m/dalle
74,00 m/rep. Site Basses eaux
Sable
Sable
Niveau haut du canal non observé (?)

Fig. 18 Schéma de principe du dispositif de drainage – Coupe relative au monument

3.2 A l'échelle du site

3.2.1 Situation du monument

La situation du monument est précisée sur la figure 20. On peut voir que la route de Louqsor et le canal qui la longe par le Sud sont très proches des principaux chantiers de la mission archéologique.

3.2.2 Niveau de la nappe alluviale

– Début des observations: Le niveau bas de la nappe mesuré au cours des premiers jours sous la cour péristyle, portique ouest, se trouvait à 0,95 m sous les dalles basales des colonnes. Au même moment, le chantier de dégagement de la rampe d'accès était hors d'eau (nappe à environ - 0,30 m sous le sol de la fouille).

– Fin des observations: Deux jours après la reprise de l'irrigation, une remontée générale de la nappe (+ 0,40 m) s'est manifestée sous l'ensemble du chantier de la cour péristyle. La remontée à été progressive en commençant dans le secteur du troisième pylône en direction de la cour péristyle. Les témoignages de la mission archéologique indiquent clairement que quelques semaines plus tôt, la rampe d'accès était partiellement sous l'eau, équivalent à un niveau de 0,60 à 0,70 m au-dessus du plus bas niveau que nous ayons observé.

– Caractérisation des niveaux: Le niveau le plus bas se trouvait vers 74,00 m d'altitude par rapport au niveau de référence du chantier (76,04 m). Une laisse de hautes eaux a été vue sur la paroi d'une fouille au Nord de la salle péristyle. Sa cote relative était de 75,20 m. Cette cote est également celle du sommet d'une des dalles basales de colonne (n°2 PNW) de la salle péristyle. Dans ce secteur, les traces de sels couvraient le tambour basal (cote: 76,08 m), tandis que l'altération du pilier montait jusqu'à la cote 76,44 m (colonne n°10 PNW).

3.2.3 Phénomènes observés: Nous avons donc pu observer que le sommet du dallage de la cour péristyle se trouve à 0,95 m au-dessus de la nappe en basses eaux et pratiquement sous les plus hauts niveaux de remontée de nappe.

Il est très important de noter que la migration des sels à la surface des dalles de la cour péristyle avait lieu en période de basses eaux, mais que les bas niveaux durent peu de temps entre deux campagnes d'irrigation.

4. Moyens de remédiation

4.1 Perspectives à court terme

Il est probable que le dispositif final ne sera pas en place pour la prochaine campagne de fouille de la mission, c'est pourquoi une recommandation peut être formulée pour rendre plus efficace le pompage en fouille.

Cela concerne le point de rejet de l'eau pompée dans les fouilles. Nous avons vu le dispositif utilisé en janvier 2003. Le point de rejet avait lieu dans le petit fossé d'irrigation en terre bordant le site par le Nord. Le fossé en question était plein d'eau sur toute la longueur du site produisant une zone de recharge de la nappe, celle ci retournant sous le site en contribuant notamment à la remontée de la nappe dans la partie Ouest du temple.

4.2 Perspectives à moyen ou long terme

Il est possible de limiter ou de maîtriser les risques de salinisation en contrôlant les remontées de nappe y compris pendant les périodes d'irrigation. Nous proposons de privilégier la solution du drainage par la mise en place d'un réseau de drains sous le site.

L'établissement d'un réseau de drainage a un prix, mais il est moins contraignant dans son

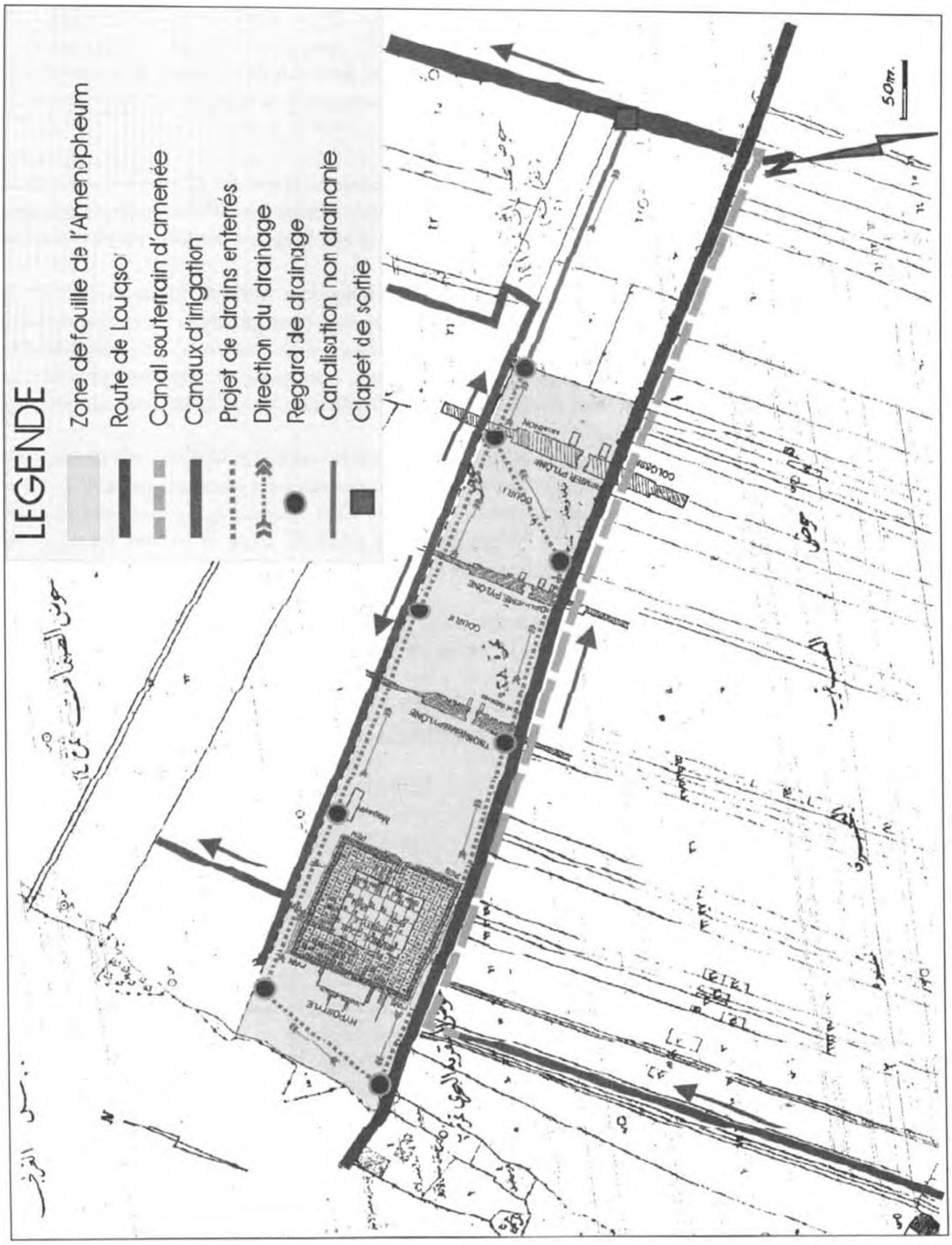

Fig. 19 Site de Kom el-Hettân – Proposition d'un dispositif de rabattement de la nappe alluviale par drainage permanent

fonctionnement qu'un dispositif de pompage onéreux en énergie et exigeant en surveillance. A Kom el-Hettân, le fonctionnement doit être permanent, c'est la raison pour laquelle nous privilégions ici la solution du drainage par rapport à celle du pompage, car ce dernier accumule des inconvénients tels que: entretien, énergie, surveillance, coût d'une pompe de secours.

Le dimensionnement du dispositif de drainage devra être validé par l'administration de l'irrigation dans la mesure où le point de rejet se trouvera dans un des canaux dont elle a la gestion. Les principaux éléments de ce dimensionnement sont montrés sur la figure 19. Son principe consiste en deux drains longitudinaux au temple épargnant les structures des salles hypostyles et péristyles. Il devrait en outre comporter les éléments suivants:

Les deux drains longitudinaux à la parcelle de fouille du temple doivent être installés à une profondeur minimum de 1,5 m par rapport à la cote moyenne du dallage de la salle péristyle. La pente minimale qui devra être imposée au drain pour permettre un écoulement vers l'exutoire sera de 0,05%. Cet exutoire sera le canal qui se trouve à l'Est des Colosses de Memnon, soit à 1000 mètres de la salle hypostyle. Deux branches de drains sont à prévoir. Une branche courte du côté de la route s'arrêtera au niveau de la première cour du temple pour rejoindre la branche longue en oblique. Des regards de surveillance seront placés aux jonctions et à des distances de 200 à 300 mètres (8 regards). On peut imaginer améliorer le dispositif par l'installation d'un clapet anti-retour à la sortie de la conduite sur le canal. La mise en place des drains sera faite par ouverture d'une tranchée. Il conviendrait de placer le drain dans un massif de granulats locaux (sables). La tranchée sera ouverte au moyen d'un engin mécanique dont la disponibilité en Egypte devra être étudiée avec les autorités. Cette opération sera hautement délicate en terme de conservation archéologique. Elle nécessitera une concertation préalable avec le service des Antiquités Egyptiennes et une supervision en présence des archéologues de la mission. La durée habituelle d'un tel chantier serait de trois semaines. Les conditions locales et archéologiques devraient au mieux doubler cette durée. Nous comptons donc 2 mois.

Au cours de sa réalisation, ce dispositif devra faire l'objet d'un contrôle altimétrique afin d'assurer un bon écoulement gravitaire vers le canal. Car l'efficacité du dispositif dépendra de cette capacité d'évacuation. Les cotes de drain annoncées ici tiennent compte de nos observations de janvier 2003. Il est vivement recommandé de les recouper avec des observations de hautes eaux dans le canal exutoire, car c'est de la cote aval du drain que dépendra la cote amont et la profondeur d'installation du système.

5. Conclusions et recommandations

Les principales recommandations sont d'abord de l'ordre de la définition des objectifs de rabattement et ensuite de la définition du dispositif.

Nous avons observé que le sommet du dallage de la cour péristyle se trouve à 0,95 m au-dessus de la nappe en basses eaux et pratiquement sous les plus hauts niveaux de remontée de nappe. L'altération la plus élevée sur la base des colonnes se trouve à 1,20 m au-dessus du dallage. Un rabattement permanent de nappe à 1,50 m au minimum sous le dallage de la salle péristyle suffirait pour éviter les remontées salines.

Nous recommandons de privilégier le drainage qui est une technique déjà intégrée dans la gestion agronomique des cultures de Louqsor Ouest. Le pompage est une autre technique très efficace, mais plus sophistiquée, plus difficile à calibrer sans études plus lourdes et une fois mise en œuvre, moins adaptée aux moyens de gestion disponibles sur place.

Pour le drainage, il sera toutefois nécessaire de procéder à une étude hydrologique complémentaire de façon à tenir compte des conditions de hautes eaux dans le canal exutoire. Cette étape devrait être

faite en collaboration avec le service de l'irrigation et le service hydrologique, égyptiens. Il pourrait être réalisé en quelques mois et inclure la problématique de la traversée des terrains agricoles qui séparent les Colosses de Memnon du canal exutoire. Ce dernier aspect nécessitera une négociation entre les administrations égyptiennes et les propriétaires en terme de dédommagement et de servitude.

Nous avons proposé un tracé optimal par rapport aux zones irriguées d'où provient l'eau souterraine. Ce tracé est positionné en fonction des vestiges antiques connus. Il pourrait être rediscuté avec les archéologues en fonction des indices dont nous n'aurions pas eu connaissance. En tout état de cause, la mise en œuvre de la tranchée devra inévitablement être supervisée par une équipe d'archéologues afin de relever les traces et vestiges qui viendraient à être mis au jour. Il est important de retenir que ce dispositif est dimensionné pour le seul site de Kom el-Hettân et que, sans extension, il n'est pas supposé pouvoir améliorer la situation des temples voisins.

F.P.

X. Vorbericht zur geophysikalischen Prospektion 2002 und 2003 im Tempelbereich von Amenophis III. (Theben West) (Fig. 20a–d)

Jeweils in einer Woche im Januar 2002 und 2003 kamen im Tempelbereich von Amenophis III. geophysikalische Prospektionsverfahren zum Einsatz. Ziel dieser Untersuchungen waren unterirdische archäologische Strukturen im Umfeld des Tempels[73]. Außerdem sollte versucht werden, einzelne Statuen oder deren Fragmente zu lokalisieren. Da erfahrungsgemäß Objekte aus Stein gut mit Hilfe der elektrischen Prospektion kartiert werden können, wurden weite Flächen neben der Magnetik auch als Erdwiderstandsmessung sondiert. Die Magnetik mit einem Cäsiummagnetometer wurde 2002 von Jörg Fassbinder und dem Verfasser gemeinsam durchgeführt, die Elektrik 2002 und 2003 als Erdwiderstandsmessung mit einer Twin-Elektrode vom Verfasser allein[74]

Magnetische Prospektion

Zur magnetischen Prospektion stand ein Cäsiummagnetometer Smartmag SM4G-Spezial (Scintrex, Kanada) mit einer Empfindlichkeit von 10 Picotesla pT zur Verfügung. Es wurde dabei mit der Duo-Sensor-Konfiguration gearbeitet, um die größtmögliche Eindringtiefe zu erreichen. Hochfrequente zeitliche magnetische Störungen konnten mit einem Bandpaßfilter von 1 Hz entfernt werden. Die langsamen zeitlichen Variationen, wie die Tagesvariation, wurden rechnerisch reduziert. Nicht zu korrigieren waren dagegen die Störungen des starken Verkehrs auf der Straße, die das ganze Tempelareal auf einem aufgeschütteten Damm schneidet. Entscheidend war jedoch der Vorteil einer Verdopplung der Meßgeschwindigkeit gegenüber einer Differenzmessung und die hohe Eindringtiefe.

In dieser Anordnung werden beide Sensoren auf einem Tragegestell im Abstand von 0,5 m etwa 30 cm über dem Boden geführt, so daß in einem Gang 2 Profile des erdmagnetischen Totalfeldes gemessen werden können. Die Meßgeschwindigkeit auf dem Profil wurde mit 0.1 sec (10 Messungen pro sec) eingestellt, was bei zügigem Schritt einer räumlichen Auflösung von 15–20 cm entspricht. Die Meßdaten wurden jeweils in der folgenden Nacht ausgewertet und als Grautonbild in 256 Graustufen dargestellt. Zur Darstellung im Magnetogramm wurden die Meßdaten auf 25 x 25 cm interpoliert. Die hier abgebildeten Magnetogramme sind Differenzbilder des magnetischen Totalfeldes mit einem hochpaßgefilterten Datensatz. Auf diese Weise bleiben die langwelligen Anomalien tiefliegender Strukturen erhalten.

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[73] Zur Meßtechnik z.B. H. Becker, *Entwicklung und Einsatz von Multi-Sensor-Konfigurationen zur magnetischen Prospektion archäologischer Denkmäler*, in: *Arch. Jahr Bayern* 1996, 1997, S. 195–197; ders., *Duo- and Quadro-sensor Configuration for High Speed/High Resolution Magnetic Prospecting with Caesium Magnetometer*, in: *Magnetic Prospecting in Archaeological Sites. Monuments and Sites*, Vol. VI, 2001, S. 20–25.

[74] H. Becker, *Digitale Bildverarbeitung und graphische Datenverarbeitung in der archäologischen Prospektion*, in: *Archäologische Prospektion. Luftbildarchäologie und Geophysik. Arbeitsh. Bayer. Landesamt f. Denkmalpfl.* 59, 1996, S. 284–292.

Die hohe Meßgeschwindigkeit des Cäsiummagnetometers ermöglichte die Erfassung der gesamten von der landwirtschaftlichen Nutzung ausgenommenen Zone des Heiligtums von den Memnon-Kolossen bis an die Straßenkreuzung im Westen (etwa 550 x 120 m, was 1 Million Messungen entspricht). Im Süden konnte leider nur bis an die Straße gemessen werden. Die Messungen von 2002 sind auf das alte Koordinatensystem bezogen – die Mittellinie im Magnetogramm hat die Koordinaten 100/0 bis 100/550. Die Erdwiderstandsmessung von 2003 liegt dagegen bereits im neuen System.

Elektrische Prospektion 2002 und 2003

Die elektrische Prospektion erfolgte mit dem Erdwiderstandsmesser (Geoscan RM15 mit Multiplexer MPX15) mit einer halbautomatischen Meßwerterfassung und Datenspeicherung und einer Twin-Elektrode 0.75 m zur elektrischen Ankopplung an den Boden[75]. Die stationären Elektroden zur Einspeisung des Stroms standen für eine 20 x 40 m große Fläche in etwa 20 m Abstand von der Meßfläche. Gemessen wurde im Meterraster und anschließend auf 0.5 m interpoliert. Die extreme Trockenheit der Oberfläche verursachte ernste Probleme bei der elektrischen Ankopplung der Elektroden an den Boden, so daß eine ausgiebige Wässerung vor der Messung unerläßlich war. Die Messung 2002 wurde vom Verfasser durchgeführt, während 2003 ägyptische Arbeiter unter Anleitung gemessen haben. Mein Freund und Arzt Dr. MANFRED MOOSAUER hat bei der Messung 2003 ebenfalls assistiert. In seinen Händen lag auch die Durchführung von gezielten Bohrungen mit einer Kernsonde bis knapp 3 m Tiefe. Auf diese Weise gelang in der Meßfläche um den Zweiten Pylon die Verifizierung der in der elektrischen Prospektion gemessenen Anomalien mit hohem elektrischen Widerstand in allen Fällen. Erstaunlich war insbesondere die Tiefe der Oberkante der Steine mit 2.6 bis 2.75 m (darunter vielleicht die Sockel der großen Sitzstatuen). Als Maß für die Eindringtiefe der elektrischen Prospektion wird der 3fache Elektrodenabstand genommen (3 x 0.75 = 2.25 m). Die deutlich bessere Eindringtiefe läßt sich durch die hohe Leitfähigkeit des salzigen Grundwassers erklären, die den Strom gleichermaßen nach unten zieht. Die Unsicherheit der Meßergebnisse der elektrischen Prospektion lag vor allem an einer unzureichenden Wässerung in den Randzonen der Fläche. Ansonsten hat sich die Erdwiderstandsmessung auch zur Lokalisierung einzelner Steinfragmente bewährt, auch wenn das 'weiße Nilpferd' immer noch nicht gefunden ist.

Die Interpretation des Magnetogramms zur Struktur des Tempelbereichs ist problematisch, da die Fläche noch zu klein und außerdem durch unterschiedlichste Eingriffe stark gestört ist. Es sollte daher versucht werden, auch die landwirtschaftlichen Flächen in der weiteren Umgebung des Heiligtums und den Bereich südlich der Straße in die magnetische Prospektion einzubeziehen, was aber wegen der intensiven Nutzung ebenfalls schwierig ist. Einige archäologisch relevante Schlüsse zur Topographie des Heiligtums lassen sich aber auch schon heute ziehen. Auffällig im Bereich vor den Memnon-Kolossen

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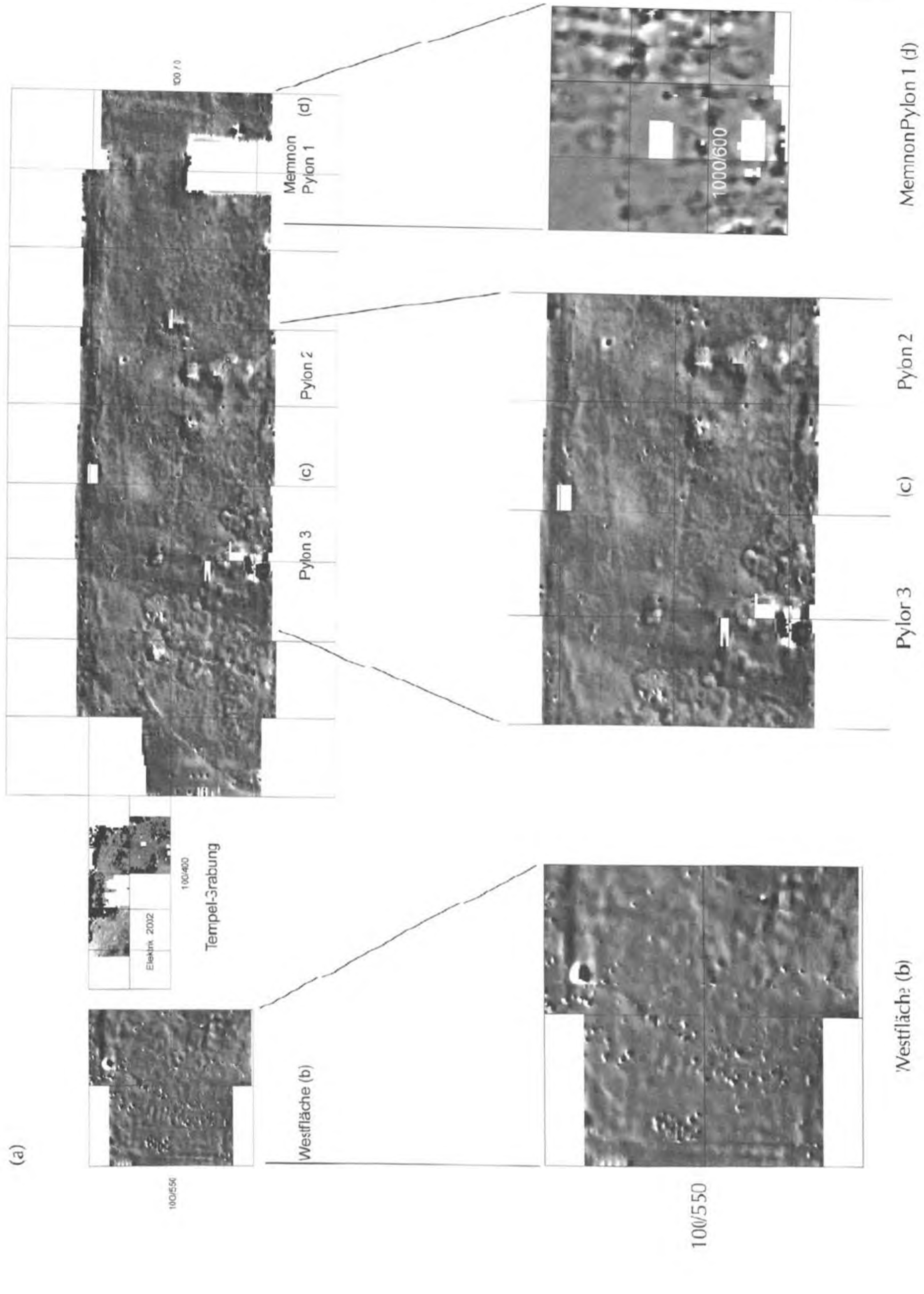
[75] H. BECKER, *Einsatz der Erdwiderstandsmessung zur archäologischen Prospektion*, in: *Archäologische Prospektion. Luftbildarchäologie und Geophysik. Arbeitsh. Bayer. Landesamt f. Denkmalpfl.* 59, 1996, S. 277–279.


(a)
100/550
Westfläche (b)
Elektrik 2002
Tempel-Grabung
100/400
Pylon 3
(c)
Pylon 2
Memnon Pylon 1 (d)
100/0
Westfläche (b)
100/550
Pylon 3
(c)
Pylon 2
1000/600
MemnonPylon 1 (d)

sind etwa Nord-Süd verlaufende Strukturen, die möglicherweise als Kanal gedeutet werden können. Noch klarer ist diese Interpretation im Resistogramm der Erdwiderstandsmessung, wo dieser Kanal (oder Doppelkanal) zu den Memnon-Kolossen abzweigt, was die Vermutung nahelegt, daß wir es hier mit einer hydraulischen Einrichtung zur Aufstellung der Kolosse zu tun haben. Eigenartigerweise ist vom Ersten Pylon keine Spur im Magnetogramm zu erkennen. Auch im Zweiten Pylon ist keine Mauer sicher zu identifizieren, obwohl die beiden teilweise aus der Oberfläche ragenden kolossalen Sitzstatuen des Königs sogar in ihrer Form zu ahnen sind. Nur im Dritten Pylon ist eine etwa 14 m breite Struktur zu erkennen, die als Lehmmauer interpretiert werden kann, die aber keinen rechtwinkligen Bezug auf die Mittelachse des Heiligtums aufweist. Die anderen auffälligen magnetischen Lineamente im weiten Vorfeld des Tempels dürften Relikte der landwirtschaftlichen Nutzung dieser Fläche vor deren Auflassung oder ebenfalls rezente Abgrabungen sein. Den interessantesten Befund lieferte jedoch die Fläche hinter dem Tempel, wo buchstäblich auf den letzten Metern ein Nord-Süd laufendes Lineament entdeckt wurde, das mit großer Wahrscheinlichkeit der westlichen Abschlußmauer des Heiligtums zugeordnet werden kann. Diese Anomalie mit negativem Magnetisierungskontrast (hell im Magnetogramm) zeigt bilderbuchmäßig einen positiven magnetischen Schatten auf beiden Seiten (dunkel) und läßt sich so als eine etwa 4 m breite Steinmauer interpretieren. Leider ist dieser klare Befund durch eine Müllhalde mit vielen Blechbüchsen stark gestört. Säulenstellungen mit negativem Magnetisierungskontrast im Peristyl des Tempels legten die Spur zur Identifikation weiterer Säulenfundamente in einem Bau direkt vor der Außenmauer. Leider gibt es auch hier wieder starke Störungen durch Müll, so daß nicht eindeutig ausgemacht werden kann, ob die Doppelstellung von acht Säulen zu einem nördlichen Torbau oder zur großen Halle gehört. Ebenfalls unklar ist, ob es sich bei einer Reihe von sechs zum Tempel offenen Räumen um ein Barken-Sanktuar handeln könnte. Derartige Befunde können aber zukünftig mit einer zusätzlichen elektrischen Prospektion eindeutig nachgewiesen werden.

Die Magnetik lieferte im allgemeinen keinen eindeutigen Hinweis auf einzelne Statuen. Da sich jedoch die beiden riesigen Sitzfiguren des Königs im Zweiten Pylon sogar in der Form ziemlich gut im Magnetogramm abzeichnen, sollte wohl doch versucht werden, einige der typischen lokalen Anomalien zunächst mit einer Bohrung zu sondieren. Zusammenfassend kann angemerkt werden, daß sich die Kombination von Magnetik, Elektrik und gezielter Bohrung gut zur archäologischen Prospektion in Vorbereitung von Ausgrabungen auch in Theben West eignet. Weitere Prospektionsmessungen und Bohrungen sind daher auch in der Planung.

H.B.

Fig. 20

a Magnetogramm von 2002 in einem 'magnetischen Schnitt' durch das gesamte Heiligtum von Amenophis III. Cäsiummagnetometer Scintrex Smartmag SM4G-Spezial, Empfindlichkeit 10 Picotesla, Raster 0.25 x 0.25 m, Differenzbild von Totalfeld und Hochpaßfilter 10 x 10 Pixel, Dynamik -15.0/+10.0 nT in 256 Graustufen (weiß/schwarz), 40 m-Gitter im alten System von 100/0 bis 100/550; Resistogramm von 2002, Geoscan RM15 mit Twin-Elektrode 0.75 m, 20 m-Gitter bei 100/400, Raster 1.0 m (auf 0.5 x 0.5 m interpoliert), Dynamik von 10 bis 80 Ohm m in 256 Graustufen (weiß = guter Leiter / schwarz = hoher spezifischer Widerstand)

b Ausschnitt aus dem Magnetogramm (Westfläche) mit der westlichen Abschlußmauer, einer Säulenhalle, Torbau und Säulenstellungen im Peristyl, technische Daten wie Fig. 20a

c Ausschnitt aus dem Magnetogramm (Fläche Mitte von Zweitem bis Drittem Pylon) mit den beiden großen Sitzstatuen im Zweiten Pylon vor der Ausgrabung und der 14 m breiten Lehmmauer im Dritten Pylon, technische Daten wie Fig. 20a

d Resistogramm von 2003 im Bereich der Memnon Kolosse (Ostfläche) mit dem Kanal und mehreren großen Steinfragmenten um den nördlichen Koloß, die beiden rechteckigen Aussparungen sind die Steinsockel der Memnon-Kolosse, technische Daten wie Fig. 20a

Abstract

The Colossi of Memnon and Amenhotep III Temple Project carried out its fifth campaign at Kom el-Hettân in winter 2002–2003. After annual defoliation of the site, study, restoration, geo-electric and radar sensings, and geological analyses were pursued. A detailed topographic and archaeological survey mapping of the temple precinct was made by COMMAP. A structural stability investigation on the Memnon Colossi points at the vibrations caused by the parking nearby, and the modern road. A hydrogeologic project was planned for a drainage system to lower the ground water table. At the Second Pylon, clearance and study of the royal colossus continued: the queen standing near the right leg of the king was identified as the great royal consort Tiye. At the Third Pylon, the place of the crocodile was cleaned, and the large alabaster blocks from two seated royal colossi were freed from vegetation and rubble, and protected with fine sand, until further funds and project for long range conservation. At the Peristyle Court, documentation and study of statuary continued. Newly cleared squares revealed parts of the pavement, as well as large pieces of colossi in red granite, quarried in antiquity, among them a head of Amenhotep III, and a pair of feet on a base decorated with southern foes. The Hypostyle Hall was partly cleared from refills of earlier excavations, for mapping. The debris were sifted and numerous fragments of statues and decorated temple walls were recovered. Six statues of Sekhmet were found deposited between column bases. Archaeological sondages were made in the west part of the temple precinct in search of remains of the enclosure wall and the sanctuaries, but no structures have been detected yet. Pottery of New Kingdom and Late Roman Period dominates the ceramic material. A report on the three major weeds on the site, *halfa* grass, reed and thorn was presented by the Centre of Preservation and Conservation of Antiquities of the SCA.

Preliminary Report of the 2002 Campaign of the Belgian Mission to Deir al-Barsha

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and Mark Depauw

(Tafeln 33–40)

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I.1 History of Research at the Site

The site of Deir al-Barsha is located approximately 300 km south of Cairo on the east bank of the Nile (27° 45' North; 30° 54' East). It is relatively well-known among egyptologists as el-Bersheh, the name used by P.E. Newberry and F.Ll. Griffith in the renowned report of the work Newberry undertook at the site in 1891–1892[1]. However, this name is both incorrect and confusing, as will be readily noticed by any visitor to the region who will ask the way to the tombs of al-Barsha: he will be shown to the cemetery egyptologically known as Sheikh Sa'id.

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[1] P.E. Newberry, *El Bersheh* I (*The Tomb of Tehuti-hetep)*, in: *ASE* 3, 1894 (hereafter cited as *El Bersheh* I); F.Ll. Griffith/ P.E. Newberry, *El Bersheh* II, in: *ASE* 4, 1894 (hereafter cited as *El Bersheh* II).

At Sheikh Sa'id, the cliffs of the Eastern Desert almost reach the river Nile, but north of this, the desert fringe gradually recedes eastwards, forming a bay not dissimilar to the one immediately to the south, where the ruins of al-Amarna are located. At its northern end, the bay turns to the west, following the course of the Nile, until the hills again touch the river just south of the village of Sheikh Timay. Several villages are located in this area, the southernmost of which is called al-Barsha. Travelling northward from here, one first passes Nazlat al-Barsha, followed by Deir al-Barsha, which more or less occupies the centre of the bay. Deir Abû Hinnis and Sheikh 'Ibâda are located further north. The tombs for which 'El Bersheh' is famous are found due east of Deir al-Barsha, and there is no reason to refer to the site by another name.

The first European visitor to describe the site was J.M. Wansleben, who visited it in 1671, but his description is too unspecific to be of any use to us. The most we can gather from his account is that he must have visited the tomb of Djehutihotep[2]. By the nineteenth century, the site had already acquired some renown, and it was visited by people like H. von Minutoli[3], J. Bonomi[4], K.R. Lepsius[5], and A. Eisenlohr[6]. Such visitors were usually only interested in one thing: the relief showing the transport of the colossal statue of the nomarch Djehutihotep. This tomb is located high in the cliffs east of Deir al-Barsha, amongst a series of tombs of other nomarchs of the Middle Kingdom. Archaeologists interested in the site have concentrated almost entirely on the plateau where these monuments are located. Other zones have received only piecemeal attention, even though they are both rich and varied. The following can be discerned (see Fig. 1):

1. The top of the hill north of the Wâdî Nakhla. The area comprises a few tombs and small quarries, and has testimony of undetermined date of Coptic activity (rock crosses).
2. The level below this zone, comprising the plateau with the nomarchal rock tombs of the Middle Kingdom at the mouth of the Wâdî Nakhla and the upper part of the slope below these tombs.
3. The northward continuation of the level where the nomarchs' tombs just mentioned occur. In this zone there are dozens of limestone quarries inhabited since the early 5th century by Coptic monks.
4. A concentration of rock tombs at the mouth of the Wâdî Nakhla, below zone 2. These tombs are commonly attributed to the Old Kingdom and First Intermediate Period.
5. The Wâdî Nakhla itself, where extensive pharaonic stone quarries can be found.
6. The top of the hill south of the Wâdî Nakhla. In this area there are open air quarries, quarry roads, and a quarrymen's (?) settlement.

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[2] S. Timm, *Das christlich-koptische Ägypten in arabischer Zeit* II, *Beihefte TAVO* 41,2, Wiesbaden 1984, p. 694. Wansleben's original publication there referred to has not been available to us, but Timm gives a brief summary of the words it devotes to the pharaonic monuments. This includes a description of a subterranean "Hieroglyphic cave" with Coptic crosses, "which the country people commonly call the Church". Although Timm doubts whether this can be the Djehutihotep tomb, this is in fact likely. The local population still call this tomb al-Kanîsa, 'the church', even today, and on Shamm an-nasîm it is frequented by visitors from miles around who want to get a baby. Wansleben's original diaries, which are now kept in the Bibliothèque Nationale in Paris, contain a very rough sketch plan of the area (see M. Martin, *Le journal de Vansleb en Égypte*, in: *BIFAO* 97, 1997, p. 191, fig. 12, reference kindly provided to us by Dr. Gertrud van Loon). Its most interesting features are that the village is depicted as being surrounded by a wall, and that some sort of rectangular structure is indicated between the village and the foothills, somewhat north of the Wâdî Nakhla.

[3] H. von Minutoli, *Reise zum Tempel des Jupiter Ammon in der libyschen Wüste und nach Ober-Aegypten in den Jahren 1820 und 1821* II, Berlin 1824, pl. 13.

[4] PM IV, pp. 177 ff.

[5] *LD* II, Blatt 134, *LD Text* II, pp. 115–120.

[6] In 1869, see *El Bersheh* II, p. 46.

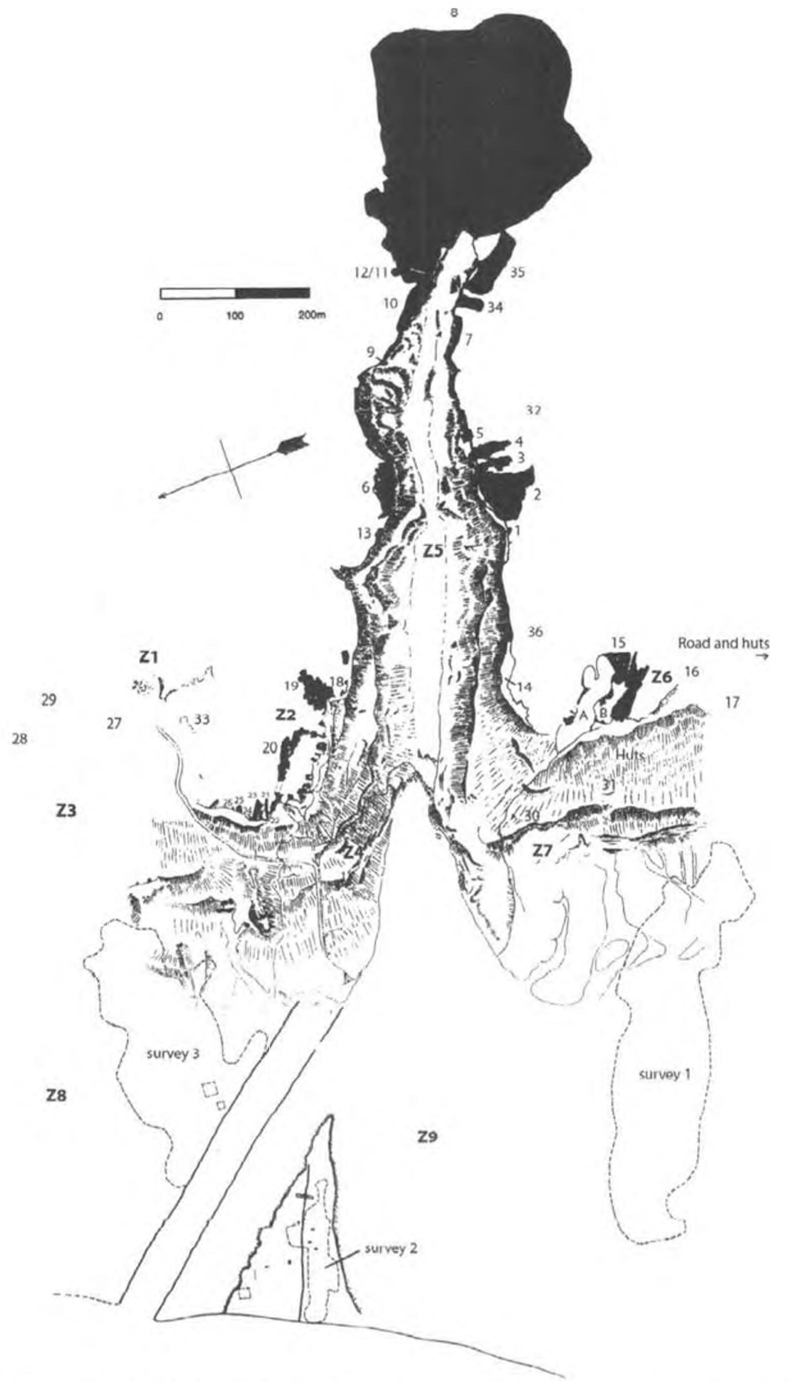

Fig. 1: Map of the Wâdî Nakhla indicating 9 different zones, the surveys, and the numbering of the quarries

7. A concentration of rock tombs on the southern slope of the Wâdî Nakhla.

8. The northern half of the antiquities area in the desert plain between the foothills of the Eastern Desert and the village. The modern drainage canal running from the mouth of the Wâdî Nakhla to the village forms the southern limit of this area. This area contains a number of tombs attributed to the Middle Kingdom.

9. The southern half of the desert plain (south of the drainage canal). This area is also said to contain Middle Kingdom mastabas.

10. The antiquities area in the centre of the village. It is a cemetery area which, in Antiquity, formed the continuation of zones 8 and 9.

11. The antiquities area on the southern border of Deir al-Barsha, called al-Tôd. A recent excavation by the SCA has revealed the presence of tombs here.

Archaeological activity has thus far peaked in two periods: one between 1885 and 1915, and the other between 1988 and the mid nineteen-nineties. The first of these began with a visit by A.H. SAYCE, who copied and published a stela of the time of Amenhotep III and some other texts[7]. Shortly afterwards, in 1889, a certain Major H. BROWN of the Egyptian Irrigation Department, who lived in Minia, visited the site and made some photographs there[8]. This documentation shows that the text accompanying the scene of the transport of Djehutihotep's colossal statue was then still intact. When P.E. NEWBERRY worked in Beni Hasan in 1890 he is likely to have met Major BROWN[9], and he may also have obtained first hand information on Deir al-Barsha from A.H. SAYCE. At any rate in 1891–1892 P.E. NEWBERRY directed his team to the site where it copied all decoration and inscriptions then visible in zone 2. The same mission also produced the only published map of the site, and surveyed some parts of it (notably zones 1, 2, 4, 5 and 6). In subsequent years, several tombs were excavated by G. DARESSY and A. BEY KAMAL[10], and it is clear that illicit digging was taking place as well. In 1915, G.A. REISNER, working on behalf of Harvard University and the Museum of Fine Arts in Boston, carried out an excavation leading *i.a.* to the discovery of the famous tomb of the nomarch Djehutinakht (IV or V)[11]. Most of these excavations have barely been published.

After REISNER's departure, archaeological activity at Deir al-Barsha ceased for many decades. In the early 1970s the Egyptian Antiquities Organization undertook some excavations inside the village of Deir al-Barsha itself, but nothing of this was ever published[12]. During his survey of Middle Egypt, D. KESler also visited the site. On the basis of his observations he offered a highly interesting interpretation of the composition of the population of the cemetery as a whole[13].

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[7] A.H. SAYCE, *A dated inscription of Amenophis III*, in: *PSBA* 9, 1887, pp. 195–197.

[8] See W.V. DAVIES, *Djehutyhotep's Colossus Inscription and Major Brown's Photograph*, in: W.V. DAVIES (ed.), *Studies in Egyptian Antiquities. A Tribute to T.G.H. James, BM Occasional Paper* 123, London 1999, pp. 29–35.

[9] He was at any rate on close terms with him during his campaign in Deir al-Barsha, see T.G.H. JAMES, *The Discovery and Identification of the Alabaster Quarries of Hatnub*, in: *CRIPEL* 13, 1991, pp. 79–84.

[10] A. BEY KAMAL, *Rapport sur les fouilles exécutées à Deîr-el-Barshé en janvier, février, mars 1901*, in: *ASAE* 2, 1901, pp. 206–222; ID., *Fouilles à Dêïr-el-Barsheh (mars–avril 1900)*, in: *ASAE* 2, 1901, pp. 14–43; ID., *Fouilles à Deir-el-Barché exécutées dans les six premiers mois de l'année par M. Antonini de Mallawi*, in: *ASAE* 3, 1902, pp. 276–282; G. DARESSY, *Fouilles de Deir el Bircheh (novembre–décembre 1897)*, in: *ASAE* 1, 1900, pp. 17–43. There is also a brief article from this period on some of the tombs in zone 6: J. CLÉDAT, *Notes sur la Nécropole de Bersheh*, in: *BIFAO* 1, 1901, pp. 101–102.

[11] See E.L.B. TERRACE, *Egyptian Paintings of the Middle Kingdom*, London 1968 for some of the most well-known objects found and references to further literature. For a survey of the early archaeological activity at Deir al-Barsha, see T. ZIMMER, *La moyenne Égypte: méthodes d'investigation bibliographique et priorités, BSFE* 96, Mars 1983, pp. 22–25. See now also H. WILLEMS, *s.v. Deir el-Bersheh*, in: K.A. BARD (ed.), *The Encyclopedia of the Archaeology of Ancient Egypt*, London – New York 1999, pp. 246–247 (with bibliography).

[12] A brief account reproducing a newspaper clipping was published by J. LECLANT, *Fouilles et travaux en Égypte et au Soudan, 1969–1970*, in: *Orientalia* 40, 1971, p. 234. In 1972 these excavations, directed by MAHMOUD HAMZA and OSIRIS

In the late 1980s, H. Willems, then working for Leiden University, took the initiative for a new archaeological and epigraphic project after a cursory inspection of the nomarchal tombs in 1984 had indicated the scientific potential of the site[14]. In 1988, he and O.E. Kaper carried out a brief survey, attention being paid not only to the tombs of the Middle Kingdom nomarchs, but also to those in the plain and to the quarries in the Wâdî Nakhla. The most important results were the discovery of a nomarchal tomb and of a long autobiographical inscription in zone 2, but it also became clear that the archaeology of this zone can only be understood if the quarry activity in the wider environment (which led to the destruction of the tombs) is taken into consideration as well[15].

Meanwhile, Willems had sought contact with E. Brovarski, who was then in charge of the Egyptian section at the Museum of Fine Arts in Boston, in order to consider possibilities for a joint expedition to the site. As a result of this, the project became a joint effort of Leiden University, the Museum of Fine Arts in Boston and the University Museum of Penn State University, Philadelphia. In February–March 1990, the American and Dutch missions worked at the site, mainly paying attention to zone 2. During this campaign, the Leiden University mission concentrated on the area around the tomb of Ahanakht I (tomb 5 according to Newberry's numbering system[16]), the American mission on Newberry's tombs 1 and 7[17]. However, the instability of the monuments posed enormous obstacles to the progress of the work. Accessibility to tomb 7 was unproblematic and the epigraphic work progressed rapidly here. In tomb 5, the situation was much less comfortable, although the small tomb chapels cut into the slope below it (Newberry 8-10) were easily accessible. Therefore, the work focused on these latter, although several unpublished reliefs in tomb 5, some of which have been robbed in 1995, have been copied. The masses of fallen rock around tomb 1, and the extreme instability of this monument, soon made clear that its investigation was virtually impossible unless the stability problems were remedied. It was also clear that such remedial measures would be as costly as they would be complex. It was – and is – even doubtful whether it is desirable to touch this monument considering the potential hazards to the surrounding monuments. It was evident that the continuity of the work in tombs 1 and 5 would have to await assessment of the situation by specialists.

The next mission took place in February–March 1992, but owing to various circumstances the American partners did not participate this time. They delayed their next campaign to the autumn of the same year, but again, they proved unable to work at Deir al-Barsha. Since, they have moved their work to Saqqara. The Leiden mission, however, continued its work at Deir al-Barsha both in spring and autumn 1992. Epigraphy was again a main focus of attention, but besides this, a small area was cleared

Ghobrial, led to the find of the tomb of the First Intermediate Period nomarch Khuu (see J. Leclant, *Fouilles et travaux en Égypte et au Soudan, 1971–1972*, in: *Orientalia* 42, 1973, p. 405; M. Robinson, in: E. Brovarski et al. [eds.], *Bersheh Reports* I, Boston 1992, p. 3).

[13] D. Kessler, *Historische Topographie der Region zwischen Mallawi und Samalut, Beihefte TAVO* 19, Wiesbaden 1981, pp. 96–107. See also F. Gomaà, *Ägypten während der Ersten Zwischenzeit, TAVO* 27, Wiesbaden 1980, pp. 107–113.

[14] The results of the latter inspection formed the basis of H. Willems, *The Nomarchs of the Hare Nome and Early Middle Kingdom History*, in: *JEOL* 28, 1983–1984, pp. 80–102.

[15] H. Willems, *Deir el-Bersheh. A Preliminary Report,* in: *GM* 110, 1989, pp. 75–95 (hereafter cited as Willems, in: *GM* 110): O.E. Kaper, *Un moine distrait à Deir el-Bercha*, in: W. H. van Soldt (ed.), *Pap uit lemen potten. Papers in memoriam of Mia Pollock*, Leiden 1991, pp. 38–41.

[16] Later in this article we will propose a new numbering system, but for the time being we adhere to that of Newberry, which is most widely known.

[17] E. Brovarski et al. (eds.), *Bersheh Reports* I, Boston 1992 (hereafter cited as *Bersheh Reports* I).

west of tomb 5. This trial trench confirmed that the nomarchal tomb discovered here in 1988 possesses two large tomb shafts, which were narrowly missed when REISNER worked there in 1915. Thirdly, the late CHR. MAUGENEST (Delft Technical University) and F. SCHOKKING (then Geological Survey of the Netherlands) carried out geological and geotechnical investigations, aiming on the one hand at achieving a better understanding of the mining history of the site, and on the other at making a description of the stability of the rock formations around tombs 1 and 5[18]. On this basis, proposals were formulated for improving the stability of both these monuments.

Between 1992 and 1995, the Leiden mission made several brief visits to the site in order to refine the plans for remedial measures around tombs 5 and 1. In close cooperation both with the Dutch embassy and the Egyptian authorities, funding to effectuate this work was obtained from UNESCO, the Dutch government, and other parties. However, the political unrest prevalent at the time in Middle Egypt, rendered the effectuation of the work impossible, and the funding that had been raised was gradually withdrawn. When WILLEMS was appointed at Leuven University in 1996, he moreover had to direct his attention to other duties. This led to a temporary halt in his involvement in Deir al-Barsha[19].

In 2001, however, he obtained grants to continue the work described in the preceding paragraphs. Earlier contacts with R. FREED, curator of the Egyptian collection of the Museum of Fine Arts, Boston, had made clear that she saw no realistic possibilities for a continued American participation in the project. The project is therefore henceforth an exclusively Belgian responsibility.

The intrinsic interest of the site need not be stressed. However, one may ask why the new project has selected a site in Upper Egypt and not, for instance, one in the Nile Delta, where, according to an increasingly influential view, the archaeological remains are seriously under threat owing to population stress and land reclamation activities. One reason is that the Upper Egyptian nomarchal cemeteries have not received much attention in recent years, apart from N. KANAWATI's mainly epigraphic missions. One aim of the project is to stir renewed interest in this branch of research which has been out of fashion for far too long. Another is that it is really a simplification to state that monuments in Upper Egypt are not threatened. In 1995, large parts of the decoration of the tombs of Ahanakht and Djehutihotep have been stolen (although most of these have been retrieved, and the perpetrators of the robberies have been placed under arrest). Much more serious threats are, however, being posed by the sprawling settlements in the region. During the 1992 campaign, Deir al-Barsha was still a small and isolated village. Nowadays, the approximately 1 km stretch southwards to Nazlat al-Barsha is occupied by a new settlement, which is now also extending across the entire width of zone 9 just beyond the border of the land owned by the Supreme Council of Antiquities. North of the village, a large area probably containing an Old Kingdom cemetery has been built over by a chicken farm. During our presence in April 2002, a large, illicit irrigation project was begun in zone 8. Fortunately the Egyptian authorities have been swift in countering this latter threat. The growing housing needs of the local population also pose threats. It must be feared that the outskirts of the cemetery of the First Intermediate Period and Middle Kingdom,

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[18] F. SCHOKKING, *Geotechnical Stability Investigation of the Ancient Burial Site of Deir el-Bersheh, Province of Minia, Egypt*, Haarlem, Geological Survey of the Netherlands, Project Number 5103, 1992.

[19] Some excavations were carried out in the same area in 1995 and 1999 by MUHAMMAD HALLAF, who reports no remarkable finds (personal communication). He also worked in the desert plain east of the village to test the ground before the new drainage channel leading from the mouth of the Wâdî Nakhla to the northern circumference of the village was dug. Here some mud brick tombs were found which are said to have produced some remarkable faience objects. The Supreme Council of Antiquities has carried out further soundings to the north of the village of Deir al-Barsha and in the village centre itself in 2002–2003 (directed by Mr. HILMY HUSSEIN SULAYMÂN). We have been informed that these excavations have resulted in the find of mud brick tombs.

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which extend under the village, will soon be destroyed or inaccessible by new constructions. The alarming speed of these developments shows that no time should be lost in the study and preservation of the site.

1.2 Aims of the Present Project

The brief historical survey presented above makes clear that egyptologists have been primarily interested in zone 2 because it is there that most tombs with decoration and inscriptions are encountered. The present project also has a natural interest in these monuments, but this is not our only, and not even our most important area of interest. Publications of decorated and inscribed tombs tend to focus on the sometimes unique and delicate details such monuments have to offer, but they only rarely contribute to an understanding of the society in which they were created. Older publications in particular are heavily biased in the sense that the few richly decorated tombs are treated with meticulous care, whereas the smaller, plainer, or otherwise 'less interesting' tombs are barely mentioned at all. This does not necessarily mean that the poorer cemeteries have not been excavated. Frequently, however, archaeologists have felt no need to document such remains. In either case, the more monumental structures (which may have been made for perhaps 1–2% of the total population) are well-known, while the remaining ones (representing perhaps 98% of the population) are largely beyond our grasp. Clearly, statements about the burial customs of 'the Egyptians' must be gravely distorted under such conditions.

At Deir al-Barsha, attention has been almost exclusively focused on the burials of the nomarchs of the Middle Kingdom and some of their immediate entourage. Both on the north and south flanks of Wâdî Nakhla, dozens of (presently) undecorated rock tombs exist to which hardly a word has ever been devoted in print. Clearly, these are likewise elite cemeteries of considerable importance, and it is commonly assumed that they date to the Old Kingdom and First Intermediate Period[20]. Further west, down in the plain, there is a group of completely different cemeteries (zones 8 and 9). On the basis of the publications of A. Bey Kamal and G. Daressy, and of the unpublished field notes by G.A. Reisner, these tombs are generally dated to the Middle Kingdom. These archaeologists claim to have excavated several dozens of tombs, but their reports are so selective that it is impossible to understand the extent of these cemeteries, the types of tombs encountered there, or the status of the populations buried there. That the cemetery must have been extensive is proved by the fact that it continues below the Coptic cemetery to re-emerge in the village centre (zone 10)[21]. About a kilometre further south, in an area in the village called al-Tôd (zone 11) another Supreme Council of Antiquities excavation carried out by Ayman Gamîl is said to have produced Coptic tombs, but also pharaonic burials. About one kilometre north of zone 10, chief inspector Hilmy Sulaymân of the Mallawy inspectorate has carried out trial excavations in April–May 2002 to test whether this area contains antiquities. I have seen two Old Kingdom shaft tombs here. In December 2002 and January 2003 he continued these excavations in the centre of the village. These have produced tombs said to contain no interesting remains. It is quite possible that all of these cemeteries are actually sectors of one large burial ground. Be this as it may, the cemeteries in the plain are very extensive, and must have accommodated a large population.

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[20] Since the days of Fraser, the only extensive discussion of these tombs is D. Kessler, *op. cit.*, pp. 96–107.

[21] This area (zone 10) was partly excavated in the 1970s by Mahmoud Hamza and Osiris Ghobrial, who allegedly found the tomb of the First Intermediate Period nomarch Khuu there (J. Leclant, *Fouilles et travaux en Égypte et au Soudan, 1971–1972*, in: *Orientalia* 42, 1973, p. 405). In the late 1990s Muhammad Hallâf of the Mallawi inspectorate did a trial excavation there which has not been published.

On the basis of the inscriptions in the nomarchal tombs it is often assumed that Deir al-Barsha was used by people residing in al-Ashmûnein (Hermopolis)[22]. This indeed offers an explanation for the extent of the cemeteries. Interestingly, however, there was also a (First Intermediate Period) cemetery at al-Ashmûnein itself[23]. Clearly some people chose to be buried in the town, others built a tomb in the desert plain near Deir al-Barsha, whereas the nomarchal courts (at least those of the Middle Kingdom) were buried high up in the cliffs. The choice for a burial place must have been dependent on chronological developments or sociological factors of considerable interest.

Recent scholarship has devoted a great deal of attention to the social organization of such provincial communities. It is clear that the rulers were of paramount importance, not only in matters of administrative organization, but also in patterning interpersonal relationships in the community as a whole. It has been argued that these sociological realities were also mapped on life after death in ways that can still be recognized in the organization of cemeteries[24]. Two cemeteries have been analyzed from this perspective: the one on Elephantine island and those in the region around Qâw-Matmar[25]. It is by no means my intention to belittle the value of these studies. On the contrary, they have been instrumental in the formulation of our research strategy. But the preserved part of the cemetery at Elephantine is small and little is known about the contents of the tombs of the local rulers at Qubbat al-Hawa. The cemeteries in the Qâw-Matmar region are much more extensive, but they were excavated in the 1930s. Against this background, there is no need to explain the importance of a site like Deir al-Barsha. The cemeteries there are extensive and may accordingly provide insights in burial practices in a large and sociologically complex community. Moreover, spanning the period between the mid-Old Kingdom and the late 12th Dynasty, they may illustrate developments of considerable chronological depth.

While this is the overarching idea underlying the project, it is clear that much of the research will touch on these matters in at best a very indirect way. Like in any other excavation, the description and study of different types of material will be of fundamental importance. Pottery in particular promises to be of importance, because the area between Qâw-Matmar and the Faiyûm region is poorly documented in this regard. This is, moreover, the border-region between the Upper and Lower Egyptian traditions in pottery production during the First Intermediate Period and the early Middle Kingdom. The pottery corpus from Beni Hasan shows influence both from the North and from the South, but it is unfortunately only poorly documented[26].

The use of the Deir al-Barsha area as a cemetery area reflects the first period of large-scale cultural use of the area, but not the last. It has been shown in the past that the location of the nomarchal tombs of the Middle Kingdom reflects an awareness of the technical properties to the rock, because almost all of these monuments have been carved in the same geological layer[27]. This quality of limestone was also valued in later periods. Limestone quarries exist in all zones east of the desert plain (1–7), and many of these were carved out in the same stratum as the nomarchs' tombs of zone 2. In fact, all of the tombs themselves have been quarried, so that an understanding of the present state of these monuments is impossible without studying the quarries in general. This study constitutes a second main axis of our programme, for the quarries of Deir al-Barsha are in a good state of preservation. Apart from the quarries themselves, there are waste deposits, infrastructural facilities like roads and concentrations of huts, and locations where remains of the production process can still be observed. Most importantly, there are huge quantities of quarry marks, systems of lines drawn on the ceilings of some of the quarries, drawings and graffiti in Demotic. Since no limestone quarry has been studied in its entirety, the case of Deir al-Barsha offers a good opportunity to try to reconstruct how it worked, which products were produced there, and, eventually, for which markets it produced. It is certain that the quarries were in use from the New Kingdom until the 30th Dynasty, and their use may have begun earlier and continued after the Late Period as well[28].

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[22] See most extensively D. KESSLER, *op. cit.*

[23] A.J. SPENCER, *Excavations at el-Ashmunein* III. *The Town*, London 1993, pp. 51–71.

[24] See S.J. SEIDLMAYER, *Gräberfelder aus dem Übergang vom Alten zum Mittleren Reich*, *SAGA* 1, Heidelberg 1990, pp. 403 ff. (hereafter cited as SEIDLMAYER, *Gräberfelder*); ID., *Wirtschaftliche und gesellschaftliche Entwicklung im Übergang vom Alten zum Mittleren Reich*, in: J. ASSMANN/G. BURKARD/V. DAVIES (eds.), *Problems and Priorities in Egyptian Archaeology*, London 1987, pp. 175–217; ID., *Die Ikonographie des Todes*, in: H. WILLEMS (ed.), *Social Aspects of Funerary Culture in the Egyptian Old and Middle Kingdoms*, *OLA* 103, Leuven 2001, pp. 205–252; B.J. KEMP, *How Religious Were the Ancient Egyptians?*, in: *Cambridge Archaeological Journal* 5, 1995, pp. 38–50; H. WILLEMS, *Het nomarchaat als politieke, sociale en religieuze factor in de Egyptische provincie*, in: *Phoenix* 46, 2000, pp. 72–104.

[25] See the studies by S.J. SEIDLMAYER mentioned in the preceding footnote.

[26] SEIDLMAYER, *Gräberfelder*, pp. 394–397 and *passim*. Fortunately the recent dissertation by S.A. OREL, *Chronology and Social Stratification in a Middle Egyptian Cemetery*, unpublished Ph. D. 1993, has greatly improved the accessibility of the find material retrieved by J. GARSTANG at Bani Hasan.

In the early Christian period, the site was intensively used by hermits. Traces of their presence are immediately noticed in many of the rock tombs, crosses in red ochre having been painted on their walls. In the tomb of Djehutihotep, every human figure in the pharaonic reliefs was even rendered innocuous by a cross. It is not widely known that the Coptic occupation is far more widespread[29]. It is certain that monks occasionally withdrew into the quarries in the Wâdî Nakhla, for instance[30]. However, it seems certain that the monks did not normally live in total isolation. In zone 3, a little distance north of the entrance to the Wâdî Nakhla, there is an extensive and dense settlement extending northwards for several hundred metres. It must have sheltered hundreds of monks. This settlement, which has hitherto received no scholarly attention, was probably attached to the religious community living in Deir al-Barsha itself. The early Christian church of the village is located close to the northern end of the modern Coptic cemetery, and scant remains of the monastery are also said to be still visible there[31]. Although no visible remains can be seen nowadays on the surface, the religious community was founded as early as 407 A.D. by Amba Bishoi, and according to one tradition he also established two monasteries there, which would probably have been located near to the church. The settlement in the hills is located due east of the church. A double line of crystalline limestone boulders has been marked out on the western slope of the hills, and it probably marks a path ascending the hills. This path follows a straight course between the church and one of the largest buildings in the hill settlement. According to an ancient tradition still verbally transmitted in the village, the religious community founded by Amba Bishoi numbered as much as 1200 monks[32]. Every ten days, 300 of them would stay in the desert, to be relieved ten days later by the next shift. This report will show that the archaeological remains lend credulity to this story[33]. Some understanding of this community is of importance for the project, because, as will appear below, evidence of the presence of the monks crops up everywhere at the site.

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[27] Willems, in: *GM* 110, pp. 75 ff.

[28] For a preliminary description of the quarries at Deir al-Barsha, see R. Klemm/D. Klemm, *Steine und Steinbrüche im alten Ägypten*, Berlin – Heidelberg u.a. 1992, pp. 118–124 (hereafter cited as Klemm, *Steine und Steinbrüche*).

[29] Although a very informative account based mostly on written sources exists in S. Timm, *Das christlich-koptische Ägypten in arabischer Zeit* II, *Beihefte TAVO* 41,2, Wiesbaden 1984, pp. 692–696. The site is mentioned only in passing in P. Grossmann, *Christliche Architektur in Ägypten*, *HdO* 62, Leiden 2002, p. 259.

[30] O.E. Kaper, in: W. H. van Soldt (ed.), *Pap uit lemen potten. Papers in memoriam of Mia Pollock*, Leiden 1991, pp. 38–41.

[31] See S. Timm, *op. cit.*, pp. 693–694. For a plan and a brief description of the church see S. al-Suryani/B. Habib, *Guide to Ancient Coptic Churches & Monasteries in Upper Egypt*, Sohag 1990, p. 115.

[32] This tradition is summarized by S. Timm, *op. cit.* During several conversations with the local priest, father Danial, the same story was recounted to us in much greater detail, and we have been provided with Arabic literature on the topic. This material will be studied in connection with the archaeology of the region in future.

The site as described above covers an enormous area, and it is obvious that full excavation of all archaeological remains is neither feasible nor desirable. It does seem possible, however, to study the spatial organization of the site and distributive patterns of different kinds of archaeological remains by deploying different survey methods. On the basis of this, specific targets can then be defined for closer analysis. Making use of on the one hand surface sampling, topographic recording, and geophysical surveys, and on the other of detailed excavations of a limited number of tombs, an archaeologist can for instance attempt to determine the characteristics of a particular cemetery. At the present juncture, it is vital to develop a general idea of the nature of the various areas, and both surveys and small-scale excavations have been started in various regions. For this, three cemetery areas have initially been selected, as well as the quarries inside the Wâdî Nakhla and at its mouth. The specific work areas are as follows:

1. Zones 1–2: Research of parts of the cemetery of the Middle Kingdom nomarchs. Work is currently being undertaken in and around tombs 17L20/1 (Newberry 2), 17K85/1 (Newberry 5) and 17K74/1–3 (Newberry 8–10) (H. Willems)[34].

2. Zone 4: Research of parts of the cemetery below that of the Middle Kingdom nomarchs. No published record exists of earlier work in this zone (M. De Meyer).

3. Zone 8–9: Research of the cemeteries in the plain. As noted above, A. Bey Kamal, G. Daressy and G.A. Reisner have worked here in the early twentieth century, but hardly anything was published about their efforts (Ch. Peeters).

4. Zone 10: Mainly salvage work on archaeological remains left behind on the surface by earlier excavators (H. Willems).

5. Zones 1–7, but currently concentrating on zone 5: Research of the limestone quarries (D. Depraetere and M. Depauw, in collaboration with D. and R. Klemm).

As has been noted above, the stability of tomb 17K85/1 (Newberry 5) gives cause for concern. It is possible that the same applies for other areas, while others (like the one around Newberry tomb 1) are currently not dangerous, but may become so when rocks are removed in the course of archaeological work. The nature and extent of the damage clearly needs to be defined before an assessment of possible remedies can be considered. For this reason, the Dutch predecessor of the current project already undertook stability tests in certain areas. This work will be continued in the future, but already in this season a temporary stabilization of the tomb of Ahanakht I has been installed.

However, the stability of individual monuments is not our only concern. The site as a whole has considerable cultural and landscape value, but its integrity is under threat by the sprawl of the village. During our campaign, houses were constructed at the foot of the hills of the western desert, just outside the area owned by the Supreme Council of Antiquities, but nevertheless uncomfortably close to some of the monuments. Agricultural activity was also being developed at a considerable scale in zone 8; although this has, thanks to the efforts of the Supreme Council of Antiquities, now been stopped. Since 1995, some of the tomb decoration has, moreover, been severely damaged. It is clear that this important site urgently needs to be protected. For this reason, the project intends to develop a site management plan in which proposals will be formulated for the preservation and presentation of the site. This work is carried out under the general supervision of K. Van Dalen (Lemaire Centre for Restoration of the KU Leuven).

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[33] Of which S. Timm, *op. cit.*, pp. 692–696, already gave some essentials.

[34] For the new system of tomb numbers see section II below.

On the basis of the long term aims stated on the preceding pages, the mission has applied for permission to continue work in the areas described above (except al-Tôd, *i.e.* zone 11, the existence of which only became apparent to us when the campaign had already begun).

I.3 Objectives of the 2002 Campaign and Acknowledgements

The 2002 campaign had two global aims: firstly to establish an infrastructure for this and future campaigns, and secondly to pursue the research begun in the first half of the 1990s.

Infrastructurally a major problem was the absence of suitable lodgings at a reasonable distance from the site. The security authorities did not allow us to rent a house locally, so that an alternative solution had to be found. Fortunately the Supreme Council of Antiquities offered us a building plot on the site itself, and after consultation with local SCA officials, it was decided to have an expedition house constructed here. The work began on 19 January 2002 and was finished when the mission arrived in mid-March. I express my recognition to Mr. TAREK AL-SANADÎKI, an architect attached to the Mallawi Antiquities inspectorate, for finishing the work with such commendable speed, and for the quality of his work.

The scientific aims were as follows:

1. The establishment of a system of topographic reference points and to start with the production of a topographic map
2. Archaeological and geophysical surveys
3. Archaeological and epigraphic work in zones 1–2, 4, 8–9 and 10
4. Archaeological and epigraphic work in zone 5 and establishment of the geological stratigraphy of this area
5. Ceramological study
6. Preliminary stabilization of tomb 5 and preparation of site management plan

The campaign lasted from 6 January until 7 May 2002. During this interval, two work periods were realized. A small team carried out a preparatory mission between 6 and 19 January, work being resumed at full scale between 15 March and 7 May 2002.

The team comprised the following persons: JANINE BOURRIAU (archaeologist), MARLEEN DE MEYER (egyptologist), DAVID DEPRAETERE (archaeologist), MARK DEPAUW (demotist), PETER FRENCH (archaeologist), STAN HENDRICKX (archaeologist), TOMASZ HERBICH (archaeologist and geophysicist), PIOTR KOLODZIEJCZYK (archaeologist), DIETRICH KLEMM (geologist), ROSEMARIE KLEMM (egyptologist), LUCIA KUIJPER (archaeologist), LIES OP DE BEECK (archaeologist), CHRISTOPH PEETERS (archaeologist), ANTON VAN ROMPAEY (surveyor), FLORIS SCHOKKING (rock mechanics engineer), KOEN VAN BALEN (engineer architect), STEFANIE VEREECKEN (archaeologist), HARCO WILLEMS (egyptologist, field director).

I express my particular gratitude to ANTON VAN ROMPAEY, who spared no effort to introduce us to the use of a total station during the preparatory season in January. We owe a similar debt of gratitude to JANINE BOURRIAU and PETER FRENCH who offered invaluable help not only in the pottery analysis itself, but also in training the rest of our pottery team. The success of the mission has depended in a significant way on their contribution. The pottery drawings in this article were prepared for publication by MARTIN HENSE.

I am very grateful to the Permanent Committee of the Supreme Council of Antiquities for granting us permission for carrying out our work, and for assisting us in every possible manner. I especially wish to mention the positive input of the former chairman of the Supreme Council of Antiquities, Prof. GABALLA 'ÂLY GABALLA, his successor Dr. ZÂHI HAWASS, the chairman of the Permanent Committee,

Mr. MAGDI ABÛ AL-'AYLA, and the Director of Phaonic Antiquities of the Supreme Council of Antiquities, Dr. SABRI 'ABD AL-'AZÎZ. We also benefited from the efforts of the general director of Antiquities in Middle Egypt, Dr. SAMÎR ANÎS, whom I have come to appreciate both as a good colleague and as a friend. The local inspectorate at Mallawi spared no effort on our behalf. Here I especially wish to mention the director, Mr. YAHYA ZAKARIYA, the chief inspector MUHAMMAD HALLÂF, and the architect TAREK AL-SANADÎKI, who has already been mentioned above. Our inspector, Mr. SAYYID ABD AL-MÂLIK has become a true member of the team, and did all he could to facilitate our work. The two inspectors attached to the site, AYMAN GAMÎL and JOSEPH KASED showed great interest in our work and provided assistance whenever they could.

I also wish to express my recognition to the Nederlands-Vlaams Instituut in Cairo, which represented us towards the Egyptian authorities. Here, special mention should be made of BARBARA TRATSAERT, SHAHDÂN IBRAHÎM, TILLY MULDER and WILLEM VAN HAARLEM.

The mission was made possible by a research grant of the Research Fund of Leuven University and another within the framework of a research programme of the Fund for Scientific Research – Flanders.

H.W.

II. The Establishment of Reference Points and Topographical Mapping; the System of Reference Numbers

No adequate topographical plan of the site exists. The only one available was drawn by M.W. BLACKDEN and G.W. FRASER, who participated in P.E. NEWBERRY's expedition[35]. This map was produced in February 1892, *i.e.* in at most four weeks[36]. According to FRASER's report, the measurements were taken from a "base line at the mouth of the valley, which we will here suppose to be the starting point of all measurements"[37]. Clearly the bed of the wadi was measured by means of measuring tape. It is highly doubtful, however, whether such a method was deployed for the steeper parts of the wadi slopes. It seems more likely that a plane table must have been used here. Although the methods used for drawing the plan may seem rather primitive, the map is remarkably correct. Unfortunately, P.E. NEWBERRY only published a "sketch" based on FRASER's detailed map[38]. The present whereabouts of the latter are unknown to us.

Apart from this general plan of the Wâdî Nakhla, NEWBERRY likewise published a "sketch survey of the tombs of the Middle Kingdom (from plans and general survey made by M.W. BLACKDEN and G.W. FRASER)"[39]. This plan covers zone 2. G. DARESSY, who worked at the site six years after NEWBERRY, apparently had no access to a copy of the latter publication, and only published a very sketchy plan of part of zone 2[40]. A. BEY KAMAL's report contains a copy of FRASER's plan to which some details have been added[41]. G.A. REISNER produced a new plan of the part of zone 2 on which he concentrated his attention[42]. This plan indicates the position of a number of tomb shafts and other architectural elements not rendered in the earlier plans. It is not clear which method was used for drawing this plan

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[35] See *El Bersheh* II, pl. II.

[36] *El Bersheh* I, p. vii.

[37] G.W. FRASER, in: *El Bersheh* II, p. 55.

[38] *Loc. cit.*, n. 1.

[39] See *El Bersheh* II, pl. III.

[40] G. DARESSY, in: *ASAE* 1, 1900, p. 23.

[41] A. BEY KAMAL, in: *ASAE* 2, 1901, p. 16.

[42] It has been published in E.L.B. TERRACE, *Egyptian Paintings of the Middle Kingdom*, London 1968, p. 12.

In 1988, H. WILLEMS made an attempt to incorporate this plan into KAMAL's in order to bring all relevant published evidence together in a single map of zone 2[43]. Clearly this map holds no claim to exactitude, the aim being merely to offer a survey of the major archaeological features of this part of the site. It was, in fact, impossible to simply superimpose REISNER's plan over KAMAL's, because the two are not entirely compatible. After the 1988 survey, WILLEMS published a slightly adapted version of this map, in which the position of the newly discovered nomarchal tomb to the west of tomb 5 has been added[44]. A slightly adapted version of this plan was published in the preliminary report of the 1990 campaign[45].

This survey makes clear that some energy has been invested in updating the plan of zone 2, but also that the plans in use today are basically reworked versions of the one established by BLACKDEN and FRASER in 1892. The old plan of the Wâdî Nakhla and its slopes has never been adapted, and the rest of the site has never even been mapped at all[46]. The establishment of a new topographic map is clearly among the primary tasks of the present mission.

In January 2002, the first task was the placement of reference points. The main grid origin was established on a concrete surface behind the *ghafir*'s hut in front of the entrance to the Wâdî Nakhla. Making use of GPS equipment, imaginary axes running north-south and east-west, and crossing one another at the main grid origin were established.

The coordinates of the main grid origin were arbitrarily put at x = 10,000 m, y = 10,000 m, z = 50 m. All positions at the site can consequently be expressed in coordinates, in which an increase of the x-value means a spatial displacement towards the east, and an increase in the y-value a displacement towards the north. The z-value is an estimate based on information provided by large-scale topographical maps. In the future, a more accurate correlation of this value to mean sea level will be established, and the derived levels will be automatically adapted. Positions in the horizontal plane will however always be relative to the main grid origin, with coordinates 10,000/10,000.

Some work has been invested in topographical mapping. Thus far, only small parts of the site have been mapped, and no useful purpose would be served by reproducing the results achieved thus far. We have however made a preliminary sketch plan (Fig. 1) based on the areas we did map and FRASER's plan.

Previous scholars have developed a number of different reference systems to refer to *in situ* archaeological remains like tombs. These systems clearly reflect that the scope of the research was mostly restricted to the platform with the Middle Kingdom tombs. It is true that G.A. REISNER assigned numbers from 1000 upwards to the tombs in the plain, but only a few tombs effectively received such a number and their location is not always clear[47]. It is therefore imperative that a new and encompassing system is introduced. At a vast site like this the code should contain indications about the localisation of the monument, and the system should also be flexible in the sense that newly discovered monuments can be easily added to the existing list.

To this effect each tomb will receive a code referring to the imaginary 10 x 10 m square in which it is located, followed by a number from 1 up. The latter number identifies the various tombs occurring within the square.

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[43] H. WILLEMS, *Chests of Life*, *MVEOL* 25, Leiden 1988, p. 69.

[44] WILLEMS, in: *GM* 110, p. 91, fig. 8.

[45] O.E. KAPER/R. VAN WALSEM/H. WILLEMS, in: *Bersheh Reports* I, p. 43.

[46] Of course, there are the 1:100,000 and 1:50,000 survey maps of the Survey of Egypt, which include the site. They are at such a small scale as to be useless for our type of work. D. KESSLER has published a map (scale 1:200,000) which must have been based on the former of these plans. It is useful in that it affords some impression of the ancient geography of the region, but is even less detailed than the survey maps (*Historische Topographie der Region zwischen Mallawi und Samalut*, *Beihefte TAVO* 19, Wiesbaden 1981, Karte 1).

[47] For the different numbering systems, see M. ROBINSON, in: *Bersheh Reports* I, pp. 7–9.

The squares receive a code derived from their position within the coordinate system defined by the mission. In order to keep the codes as short as possible and thus facilitate easy reference we have devised the following system. The code designating a square has the form IAJ, I and J being numbers and A a capital letter. The first part of the number, *i.e.* IA, defines the position of a 100 x 100 m square, specifying the coordinates of its south-west corner. The number I denotes its east-west position and the letter A its north-south position. The main grid origin defined above corresponds to the south-west corner of square 10K and each of these values increases by one each 100 m. This means that the square to the north of 10K has code 10L, that to the west of 10K has code 9K. The second part of the number, J, corresponds to the position of the 10 x 10 m squares within the larger square defined by the code IA. The decimal number J has a value between 00 and 99, each number indicating a 10 x 10 m square. These squares are numbered in an order from west to east and from south to north. Accordingly a 10 x 10 m square situated between 50 and 60 m east of the main grid origin 10K will be called 10K05, and a square situated between 20 and 30 m north of the main grid origin 10K20. The first tomb to be identified in the square will be called 10K20/1, and individual shafts belonging to it will receive a code extension written in capital letters. Thus the second tomb shaft to be identified in this structure will be named 10K20/1B. Although it is true that such numbers are less easy to memorize than, for instance, NEWBERRY's 'tomb 2', the sheer size of the site currently being investigated, and the amount of tombs to be expected there, impose another system like the one proposed here.

C.P./H.W.

III. Zones 1, 2 and 4

III.1 Zone 2

Considering the fact that the nomarchal tombs of zone 2 are most widely known, the report of our field work starts here. The main aim of this year's work was, firstly, to continue the epigraphic recording of tomb 17K74/1 (NEWBERRY's 10), and secondly to begin clearing the archaeological dump in front of the tomb of Djehutihotep (17L20/1, NEWBERRY's 2). The work on tomb 17K74/1 will be described in a later report, when the epigraphic record and the excavation of the tomb have been completed[48].

One of the first aims of the present mission was the clearance of the archaeological spoil heap in front of the entrance to the burial apartments of Djehutihotep[49]. The reasons for this were as follows: No pottery from Deir al-Barsha has ever been published. Having information about provenanced material is therefore of utmost importance. The spoil heap in front of the tomb of Djehutihotep and the one around the two tomb shafts in zone 1 were promising areas. On the one hand the origin of the material in these spoil heaps is reasonably certain. On the other, it seemed possible to remove this disturbed material swiftly. In this way, the pottery team would soon have access to a collection of reference material.

It seemed clear from the outset that the spoil heap in front of the tomb of Djehutihotep contains material originally removed from that tomb itself. One reason for this is that the heap lies right in front of its entrance. Secondly, H. WILLEMS made a casual surface find there in 1992 which tends to confirm this impression. It concerns a fragment of a wooden cylinder inscribed with part of a funerary inscription (see Fig. 2A). This find reminds one of similar fragments discovered in 1900 by A. BEY KAMAL. He men-

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[48] Almost the entire decoration has now been recorded, but the description has little to add to what has been stated in WILLEMS, in: *GM* 110, pp. 81–82 and ID., in: *Bersheh Reports* I, pp. 48–50.

[49] These excavations were carried out by LUCIA KUIJPER, LIES OP DE BEECK and HARCO WILLEMS.

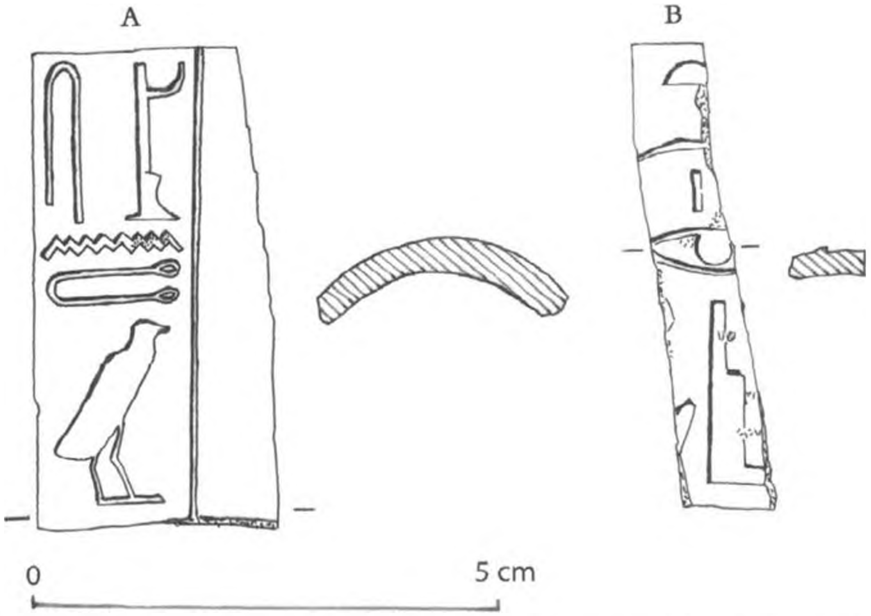
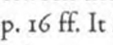
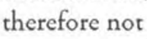


Fig. 2: A Fragment of wooden cylinder (surface find April 1992, dump in front of tomb of Djehutihotep); B Fragment of wooden cylinder (excavated in same dump in April 2002)

tions "fragments de petites boîtes cylindriques, dont quelques-uns portent des inscriptions gravées, peintes en bleu et remplies ensuite de cire. On ne distingue plus que les fragments de légendes suivants: n° 1 , n° 2 , haut. o m. 05 cent"[50]. In this citation, the size indication is probably an error for 0.05 m. KAMAL's report makes clear that he was concentrating his efforts on the courtyard area of the tomb of Djehutihotep, although he also worked in the tomb of the nomarch Amenemhat beside it, and in front of the tomb of nomarch Nehri I. His description of the finds makes no difference between the different areas, although the material of the tomb of Amenemhat is discussed separately on pp. 16 ff. It is therefore not unlikely that most of the finds described on pp. 15–16 derive from the shafts in the courtyard of the tomb of Djehutihotep. At any rate, the fragmentary wooden cylinder discovered in 1992 measures exactly 5 cm and is also decorated with incised, blue-painted hieroglyphs. The signs make the impression of having been filled in with wax, like the ones described by KAMAL, although possibly the paint is simply dirty or disintegrating. At any rate it is likely that the item belongs to the same group as KAMAL's, and this strongly indicates that the dump derives from his (?) excavations in Djehutihotep's tomb. Another possibility is that the dump was left behind by FRASER, who likewise claims to have "carefully cleared" the tomb. He reports having found fragments of a burnt coffin, fragmentary alabaster ware, "a wooden inscribed kohl-pot[51], mummy-cloth, and a number of pieces of inlays made of

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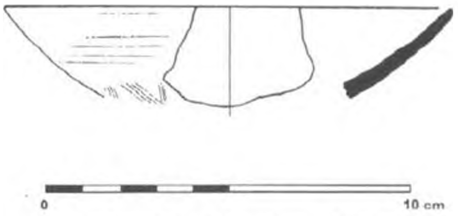
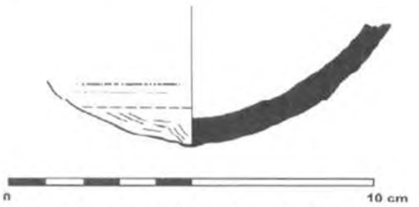
[50] A. BEY KAMAL, in: *ASAE* 2, 1901, p. 16. The measurement indicated here is incorrect. The Journal d'Entrée of the Cairo Museum (which for the rest gives the same text as KAMAL's article), gives the height as 0.052, which, on comparison with the other entries, must mean: 0.052 m. The piece mentioning the name of a Wahka is highly suggestive. Is it a present by one of the nomarchs buried in Qau el-Kebir to his colleague from Hermopolis? At any rate, the name is not otherwise attested in Deir al-Barsha or Hatnub.

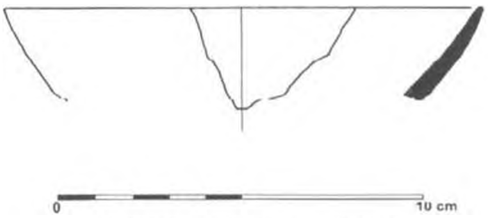
[51] *I.e.* probably a cylindrical wooden box of the type just described.



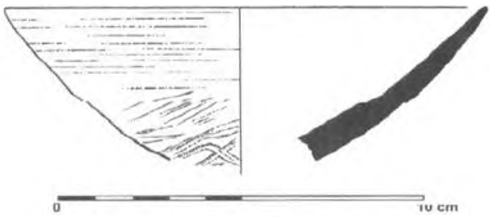
1002/20: hemispherical cup, Nile B1



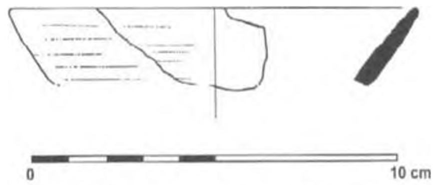
1004/29: hemispherical cup, Nile B1



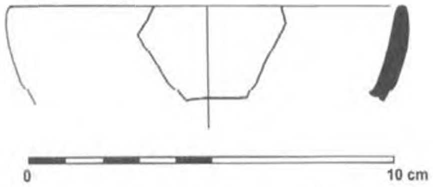
1005/26: hemispherical cup, Nile B1



1006/2: hemispherical cup, Nile B1

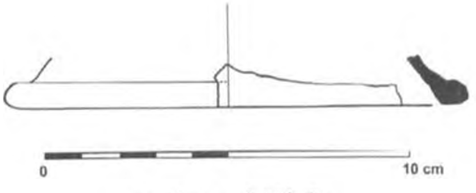


1006/3: hemispherical cup, Nile B1

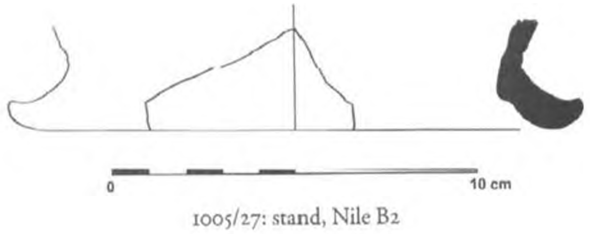


1006/4: hemispherical cup, Nile B1

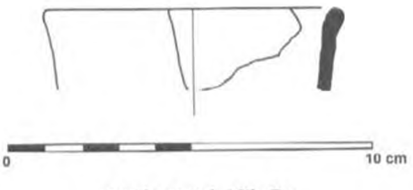
Fig. 3: Hemispherical cups from the Djehutihotep dump



1006/9: stand, Nile B2

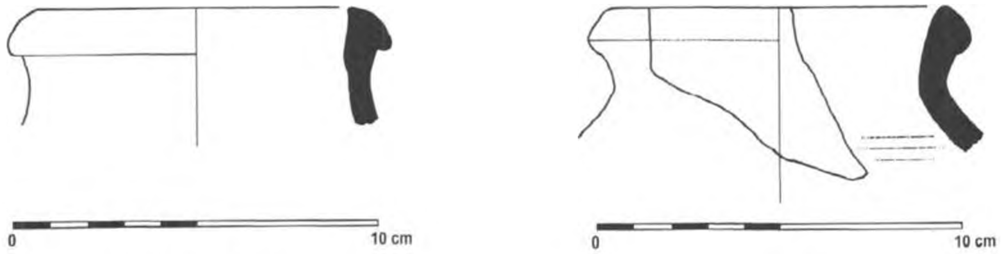


1005/27: stand, Nile B2



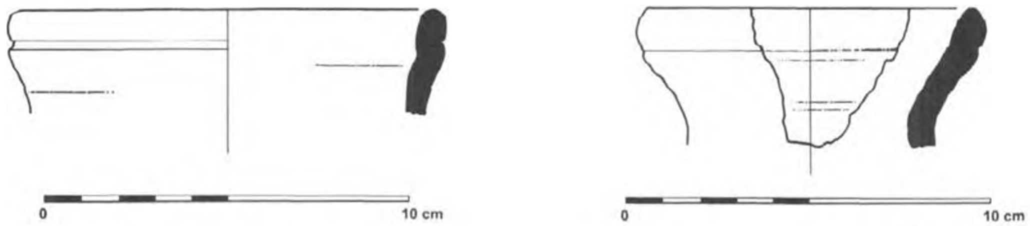
1007/5: stand, Nile B2

Fig. 4: Pottery from the Djehutihotep dump



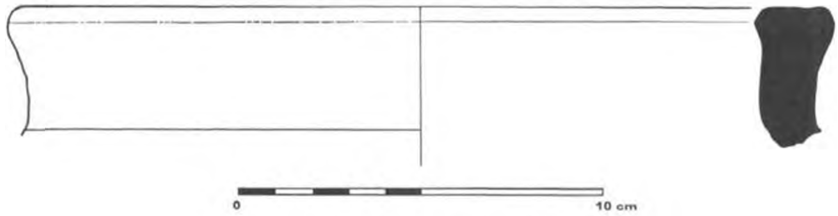
1002/24: jar, Marl A3

1003/14: jar, Marl A3



1003/13: corrugated necked jar, Marl C

1007/8: corrugated necked jar, Marl C



1006/1: large wide-mouthed jar, Marl C

Fig. 5: Pottery from the Djehutihotep dump

paste, with one fragment of dark blue glass amongst them (...); the inlays seem to have been for the large sacred eyes at the ends of the coffin"[52].

The dump was partly excavated in March–April 2002, and tends to confirm that it contains material found by either Fraser or Kamal in Djehutihotep's tomb. Apart from a further fragment of a wooden inscribed cylindrical container (Fig. 2B), we found material of the same kind as described by Fraser: large chunks of burned wood undoubtedly deriving from a coffin; blue paste inlays belonging to an udjat eye, pieces of linen, part of an alabaster unguent container, and numerous pieces of fayence and fragments of stone vessels.

Apart from such small finds, the dump also contained hundreds of – mostly very small – fragments of limestone originally belonging to the decoration of the tomb of Djehutihotep. Quantatively, most fragments belong to the two lotus columns in the courtyard, but there are also many fragments with painting and relief carving. Some large blocks probably formed part of the entrance to the tomb chapel.

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[52] In: *El Bersheh* II, p. 59.

Although the great majority of the relief fragments must derive from this tomb, a small number of others have a yellow-painted surface with incised, blue-painted hieroglyphs. At Deir al-Barsha, this style is suggestive of an early Middle Kingdom date. However, small amounts of blue, incised hieroglyphs also occur in Djehutihotep's tomb, for instance on the ceiling.

The insight that much of the dump must derive from the burial of Djehutihotep, which is dated to the reign of Senwosret II–III[53], is of some importance, as it provides a means of dating the Middle Kingdom pottery found there with some exactitude. Although the finds in the dump are not individually of great importance, this enables us for the first time to analyze a chronologically well-defined group of ceramic fragments from the site.

During its excavation the spoil heap was divided into eight arbitrary layers with a thickness of approximately 10–15 cm, labeled 1000 to 1007, the former being the uppermost sweep, the latter the bottom one. Each sweep of the dump was sieved completely, and a total of 1133 sherds were gathered for further analysis. The sherds of each sweep were sorted into broad chronological/functional groups. Diagnostics were kept for full description and drawing.

Although the spoil heap in front of the tomb of Djehutihotep has been only partly excavated, the pottery suggests some preliminary conclusions. Most of the material, as may be expected from a dump, consisted of small body sherds, and were categorised as 'undated'. This material provided information only on fabric and technique of manufacture (wheel-thrown/handmade). The best-represented periods in the remaining sherds are the Middle Kingdom and the Coptic period, the latter presumably testifying to a period when the tomb was inhabited by hermits. The preponderance of Middle Kingdom sherds confirms the impression that the dump was probably left behind by an excavator who cleared the tomb of Djehutihotep. The date of Djehutihotep's burial is consistent with most of the Middle Kingdom pottery fragments found in the spoil heap (Figs. 3–5) as well as with the great majority of the non-ceramic finds made there. Several small fragments of hemispherical cups, the drinking cups of the First Intermediate Period and the Middle Kingdom, have been recorded. They are all made of Nile B1 fabric. The high vessel indices of the hemispherical cups reflect the shallowness of the cups[54] and suggest a relatively early date. However, the system of dating hemispherical cups by their vessel indices has been based mainly on examples from Lower Egypt[55], and there is no proof that the development in Middle Egypt conformed exactly to that in Lower Egypt. A longer lifespan of certain First Intermediate types has been ascertained for Bani Hasan[56]. A continuation of the manufacture of these early forms into Dynasty 12 in Middle Egypt can therefore not be ruled out forthwith.

However, the pottery was not found *in situ*, and a date in the reign of Senwosret II or Senwosret III is based on the presumed origin of the material among the burial offerings of Djehutihotep. Other Middle Kingdom sherds, such as the Marl C wide-mouthed jars and the corrugated necked jars (Fig. 5), do fit this date[57]. Moreover, these Marl C jars, as well as the Marl A3 jars, illustrate the somewhat mixed assemblage, with vessels closely associated with Lower Egyptian forms and others which are nearer to the shapes of pottery common in Upper Egypt. This is to be expected for a site located between the two areas. The Marl A3 jars are made out of a distinctive fabric widespread in Upper Egypt. As has been noted by D. ARNOLD[58] and by J. BOURRIAU[59], the Middle Kingdom Marl A3 jars are widespread in Upper Egypt, but occur rarely in Lower Egypt. Their occurrence in Deir al-Barsha seems to point at imports from the Theban area. The earliest examples of the Marl C corrugated necked jars appear in the reign of Senwosret III. The earliest example to date is that from the burial of Sithathor Yunet, daughter of Senwosret II, at Dahshur, but the jars are attested well into the 13th Dynasty. Whereas the Marl A3 jars are probably Theban imports, the large wide mouthed Marl C jars and the corrugated necked jars point at influences from the Memphite area.

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[53] H. Willems, in: *JEOL* 28, 1983–1984, pp. 83–84.

[54] 1002/P201: Vi = 342.8; 1004/P29: base sherd; 1005/P26: Vi = 260.0; 1006/P2: Vi = 276.6; 1006/P3: Vi = 250.0; 1006/P4: Vi = 215.7.

[55] Do. Arnold, in: Di. Arnold, *The Pyramid of Senwosret I. The South Cemeteries of Lisht, vol.* I, New York 1988, pp. 140–141; M. Bietak, *Egypt and Canaan during the Middle Bronze Age*, in: *BASOR* 281, 1991, Fig. 14.

[56] S.A. Orel, *op. cit.* (n. 26), pp. 54, 217.

[57] For the wide-mouthed jars see B. Bader, *Tell el-Dab'a* XIII. *Typologie und Chronologie der Mergel-C-Ton-Keramik. Materialien zum Binnenhandel des Mittleren Reiches und der Zweiten Zwischenzeit, DÖAW* 22, Wien 2001, Abb. 48c (including more parallels). The corrugated necked jars can be compared with A. Seiler, in: *MDAIK* 55, 1999, pp. 215–216,

As mentioned above, the excavation of the spoil heap has not yet been finished, and the results remain preliminary. Nevertheless, the limited amount of pottery yet analysed seems to point to the presence of a mixed assemblage, with northern as well as southern influences, and contains indications of regional variation. Both the ceramic and the non-ceramic components clearly derive from the tomb contents of Djehutihotep or are at least consistent with its date. The high vessel indices of the hemispherical cups would, when looked upon in isolation, suggest a date in the First Intermediate Period, but the fact that these ten pieces occur together with material which so clearly derives from the late 12th Dynasty suggests that local differences in the development of vessel indices may be significant.

L.O.d.B./S.H./H.W.

III.2 Some Observations on the Nomarchal Family of the Hare Nome on the Basis of the Remains in Zone 1

The most conspicuous archaeological feature in zone 1 is formed by two large tomb shafts, surrounded by an extensive archaeological dump (tomb 19M70/1, FRASER's tomb G). In the surrounding area, there are some small open air quarries. Further, there are the remains of an ancient road, which stops a short distance from the two tomb shafts. Considering that no other tombs exist in the area, the dumps lying beside the tomb shafts can only consist of material removed from them. Since we considered the tombs to be well dated, study of these dumps would afford us with another quantity of provenanced pottery sherds. Therefore we had the intention to excavate this dump as well. Unfortunately there was insufficient time to realize this plan. It is nevertheless of some interest to briefly discuss the tombs.

G.W. FRASER was the first to take an interest in the area, where he noticed only one shaft (shaft G on his plan). He and BLACKDEN attempted to clear the shaft, but abandoned the work at a depth of about 15 m[60]. In 1897, G. DARESSY continued the excavations here[61]. He emptied the shaft, which proved to be 46 m deep (sic!)[62], and noticed some remains of funerary equipment. None of it has been described in any but the most general terms, and it is not clear what has happened to this material since.

Abb. 44,5, 12th Dynasty, with a sligthly different rim profile; M. BIETAK, in: *BASOR* 281, 1991, Fig. 8, left example, late 12th Dynasty; B. BADER, *op. cit.*, Type 46, Abb. 30–38.

[58] Do. ARNOLD, in: EAD. (ed.), *Studien zur Altägyptischen Keramik,* Mainz 1981, pp. 169–171.

[59] J. BOURRIAU, in: W.V. DAVIES (ed.), *Egypt and Africa*, London 1991, p. 129.

[60] G.W. FRASER, in: *El Bersheh* II, p. 57.

[61] G. DARESSY, in: *ASAE* 1, 1900, pp. 18–22.

[62] This size seems excessive, but the pit is currently 36 m deep, and the entrance to the burial chamber is invisible. This means that a substantial amount of rubble must have fallen into the shaft since DARESSY's time.

DARESSY also discovered the second tomb shaft, which still contained the two coffins of the lady *Sꜣ.t-ḥḏ-ḥtp*. These are now in the Egyptian Museum in Cairo where they have the numbers CG 28085–28086. In DE BUCK's publication of the Coffin Texts they bear the sigla B3C and B4C.

In the texts from Deir al-Barsha, the name *Sꜣ.t-ḥḏ-ḥtp* is attested only for two women. One *Sꜣ.t-ḥḏ-ḥtp* belongs to the latest generation in the pedigree of the nomarchs, and she must have lived in the reign of Senwosret II and III. The other is the wife of nomarch Nehri II, a contemporary of Senwosret I. Considering that coffins B3–4C are typologically close to those of the early Middle Kingdom, I have argued in the past that the *Sꜣ.t-ḥḏ-ḥtp* who owned them was most probably the wife of Nehri II[63]. Although the typological indications suggest that the dating must be approximately correct, I am no longer convinced that our *Sꜣ.t-ḥḏ-ḥtp* and the wife of Nehri II were identical. Firstly, I failed to take into consideration that the tomb of Nehri II has two tomb shafts. It is likely that his wife was buried in one of these. Secondly, the hilltop tomb where B3–4C were discovered, also has two shafts, and probably, these belonged to a couple. In view of the enormous size of the second shaft, an extremely important member of the local elite must have been buried here. If he was a nomarch, as seems not unlikely, the implication is that we have to accommodate a further nomarch into the pedigree of the rulers of the Hare nome, or that a highly important official with another function was buried here. An indication which may support the latter hypothesis could be that the tomb does not form part of the series of nomarchal tombs. Unlike these, it was a mastaba. FRASER remarks that no remains of the superstructure exist, but this is not entirely true. Close to the woman's tomb shaft, some boulders remain *in situ* which must have formed part of a superstructure (Taf. 34). At any rate, the shafts must have been covered by a tumulus, and we can hardly go amiss in the assumption that it had the shape of a mastaba.

The enormous size of the tomb shaft proves that the owner must have been of extremely high rank. Now it is known that some members of the nomarchal family of the Hare nome stood in close contact to the royal court. This is implied by the inscriptions in the tomb of Ahanakht I and his subordinate Iha, who probably lived some decades before the beginning of the 12th Dynasty[64]. Ahanakht *i.a.* claims the titles of a vizier. His immediate predecessors of the late First Intermediate Period also held the important court title of *im.y-rꜣ pr nsw.t*[65]. The tomb of nomarch Djehutinakht VI (NEWBERRY's tomb 1) contains a depiction of a couple, of which the man holds the titles of a vizier. Unfortunately his name is lost, but as P.E. NEWBERRY and F.LL. GRIFFITH plausibly point out, he was probably not identical with the tomb owner[66]. The father of the nomarch Djehutihotep was the mayor of the pyramid-town of Senwosret I at Lisht[67], so that he must have been in direct contact to the highest officials of the state in Itji-Tawy. It is possible that the owner of the hilltop tomb at Deir al-Barsha was such a man, and the type of tomb may have been influenced by the mastabas normally used in residence cemeteries.

H.W.

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[63] H. WILLEMS, in: *JEOL* 28, 1983–1984, pp. 93–94; ID., *Chests of Life*, *MVEOL* 25, Leiden 1988, p. 74.

[64] For Ahanakht's autobiography, see *El Bersheh* II, pl. XIII and E. BROVARSKI, *Ahanakht of Bersheh and the Hare Nome in the First Intermediate Period and Middle Kingdom*, in: W.K. SIMPSON (ed.), *Studies in Ancient Egypt, the Aegean, and the Sudan*, Boston 1981, pp. 18–21. A new translation and historical commentary in Dutch has just appeared (H. WILLEMS, *De autobiografie van Ahanacht I uit Deir al-Barsja*, in: K.R. VEENHOF/R.J. DEMARÉE [eds.], *Zij schreven geschiedenis*, *MVEOL* 33, Leiden 2003, pp. 57–70). For the biography of Iha, see *El Bersheh* II, pl. XXI.

[65] These titles occur in the restoration inscriptions of the nomarchs Iha and Djehutinakht son of Teti (see pp. 258f. below).

[66] *El Bersheh* II, p. 24.

[67] *El Bersheh* I, pl. XXXIII.

III.3 Excavations in Zone 4

Zone 4 is located at the western end of the northern flank of the Wâdî Nakhla, and comprises a series of rock tombs that lie immediately below the ridge of the Middle Kingdom nomarchs' tombs (see Taf. 33a). A footpath running past the tombs of zone 4 artificially divides the area between a lower and a higher ridge. Our research so far has concentrated on the tombs on the lower ridge, where the entrances to the rock cut tomb chambers of some seven tombs are presently visible. These tombs are largely filled with debris – in fact, the entire area is covered by heaps of quarry debris which has shifted down from the Middle Kingdom plateau above (zone 2). Therefore it is quite possible that, apart from the tomb chambers presently visible, others are still hidden beneath the debris.

As far as is known, the tombs of zone 4 were never or only minimally excavated. In his survey of the site, G. Willoughby Fraser[68] denotes the tombs of zone 4 with the letters D, E, and F, and dates them to the 6th Dynasty. G. Daressy[69] devotes a one paragraph description to research he undertook in the plateau below the Middle Kingdom nomarchs' tombs, but it is not clear to which tombs he refers exactly. Mention is made of artefacts dating to the Old Kingdom, Middle Kingdom and Ptolemaic Period[70]. This meagre information is all that was known about these tombs.

During the 2002 season, excavation was begun in zone 4. Before any excavation was undertaken, the area was first mapped topographically. Furthermore a pottery survey of the ridge was carried out. Five people walking over the designated area carried out the survey. The position of all pottery was recorded, the sherds receiving a record number. This consists of a letter indicating the name of the finder followed by consecutive numbers. The sherds retrieved were brought to the dig house and marked with a registration code. They then were sorted into broad chronological/functional groups.

The datable sherds of this area were mainly of Coptic date. Apart from these, many sherds of Middle Kingdom shapes were present (Fig. 9, L307/1; S320/1) as well as some Old Kingdom sherds (Fig. 7, P308/1). One sherd of New Kingdom shape was found (Fig. 10, P315/2). This sherd can possibly be related to quarry activity in quarry 19, which has a stela of the time of Tuthmosis III. Much of the Middle Kingdom material from this survey probably derived from Middle Kingdom tombs located at a higher level in the cliff.

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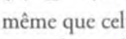
[68] *El-Bersheh* II, pp. 56–57.

[69] G. Daressy, in: *ASAE* 1, 1900, pp. 23–24. "L'étage supérieur appartient entièrement à la XIIe dynastie, c'est là que se trouvent les grandes tombes de Aha nekht, de Kaï, de Thot nekht, etc. Plus bas les époques sont mélangées et les sépultures de la XIIe dynastie sont mélangées à d'autres de l'ancien empire usurpées plus tard par les contemporaines des Ptolémées. Des recherches ont été faites sur divers points de cette nécropole. Elles ont donné des sarcophages rectangulaires de l'ancien empire, simples coffres avec une ligne d'hiéroglyphes peinte sur le couvercle et une autre tout autour (l'un d'entre eux est au nom de la ); un cercueil à couvercle bombé entièrement peint et portant des hiéroglyphes bizarres, illisibles, dont le type est le même que celui des cercueils attribués à la XIe dynastie qu'on a découverts à Gebelein en 1885; enfin au troisième étage au-dessous du tombeau de Kaï des chambres ont été remplies sous les Ptolémées de momies d'hommes et d'animaux, chiens et bœufs. La plupart des corps n'avaient pas d'enveloppe protectrice, mais quelques momies reposaient cependant dans des cercueils en terre cuite de forme anthropoïde parfois peints en blanc sur le côté et ornés de dessins mythologiques, tandis que leur couvercle plat portait en relief une figure grossièrement façonnée."

[70] A. Bey Kamal, in: *ASAE* 2, 1901, p. 15, fig. 1 indicates two different cemeteries below the Middle Kingdom nomarchs' tombs: the northern one being labelled "Sépultures de l'Ancien Empire", and the southern one "Sépultures Ptolémaïques". However, the tomb that was partially excavated during the 2002 mission is located in the "Sépultures Ptolémaïques" section and contains a late First Intermediate Period restoration inscription. It must therefore be concluded that these tombs are undoubtedly older, and were possibly reused in the Ptolemaic Period. So far, no definite evidence has been found of reburials in the Ptolemaic Period.

The 2002 mission has concentrated on one particular tomb in the lower ridge of tombs in zone 4, number 16K86/1, being the easternmost one visible on the surface. This tomb was chosen for several reasons. First of all, it contains a late First Intermediate Period restoration inscription of *Ḏḥwty-nḫt msi.n Tti*, of which parallels can be found in nearby Sheikh Sa'îd[71] and in the south cemetery at Deir al-Barsha itself. This inscription gives a *terminus ante quem* for the original use of the tomb. None of the other tombs on this ridge contain any inscriptions, with the exception of a badly preserved decree of *Nfr-ḫꜥ.w* on the façade of one of the tombs[72]. It is therefore not immediately clear which stratum of the population was buried in these tombs. We hope that further excavations will help answering this question.

Secondly, this tomb is located near a rock cut staircase that is presently still partially covered with debris, so it is unclear whence it comes or where it leads. One of the aims of the excavations in this area is to study the circulation pattern between the different tombs in zone 4, of which this staircase is a part. During the excavation of tomb 16K86/1, three steps of another staircase were uncovered leading up from the entrance alley of the tomb towards the edge of the mountain. In the next season the remaining part of this staircase will be uncovered.

Finally, most of the tombs in zone 4 show extensive traces of Coptic habitation. The monks of the nearby monastery of Deir Amba Bishoi used the tombs and quarries as hermit cells[73]. The most obvious remains of this later habitation are crosses painted in red ink which are found all over the site. The eastern and western interior walls of tomb 16K86/1 are covered with red Coptic crosses. During the excavation of the tomb abundant Coptic pottery was uncovered, as well as vast quantities of date seeds and other organic material, probably left behind by Coptic hermits occupying the tomb. The study of this later reuse of the tomb is also a goal of the project.

During the 2002 mission, a 5 x 6 m trench was set out covering the entrance to tomb 16K86/1 and a small area to the north of it which in fact forms the ceiling of the tomb. First the area surrounding the tomb was excavated until bedrock was reached. A layer of approximately half a metre of debris covered the bedrock. Though the majority of this layer consisted of mixed rubble, a few archaeological strata could be recognized. It is remarkable that these strata run horizontally, and do not slope down as might be expected from debris that shifted down from a higher point. It seems therefore likely that these layers were deposited here intentionally at a certain point in time. Further research around the trench will have to yield better insight in their original function.

The entrance passage to the tomb, which is flanked by sloping walls on each side, was cleared, and a flight of three steps was uncovered leading up and away from the tomb towards the edge of the cliff. The sides of the entrance passage turned out to be covered with red Coptic crosses, similar to those found inside the tomb. On the floor level three coins were found which probably date to the Roman Period, although no numismatic research has yet been carried out.

Study of the pottery from this area suggests a date in the 4–5th century. Many of the shapes found have parallels in the well dated layer of the South Church at al-Ashmûnein (390–460 CE)[74]. For example, several fragments of a distinct type of fine flagon with a spout were found[75], the only difference with the pottery from al-Ashmûnein being that the marl clay there has a pinkish-brown appearance, while in Deir al-Barsha it has a light yellow colour. Another example of the correlation between the pottery of al-Ashmûnein and that of Deir al-Barsha in tomb 16K86/1 can be found in the cooking pots[76].

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[71] The author is preparing the publication of this text. See also E. Brovarski, in: W.K. Simpson (ed.), *Studies in Ancient Egypt, the Aegean, and the Sudan*, Boston 1981, p. 22.

[72] *El-Bersheh* II, p. 57.

[73] S. Timm, *Das christlich-koptische Ägypten in arabischer Zeit* II, *Beihefte TAVO* 41.2, Wiesbaden 1984, p. 694.

[74] D. Bailey, *The Pottery from the South Church at el-Ashmunein*, in: *CCE* 4, 1996, pp. 47–86. Only a few examples are given in this preliminary report. A full ceramological report will appear later.

[75] D. Bailey, *op. cit.*, p. 64, pl. VIII, fig. 15, 14–45.

Before excavation inside the tomb began, one shaft was visible in the eastern corner. This shaft leads to three burial chambers, two of which are located in the southeastern wall and one in the northwestern wall. The uppermost chambers are now as good as empty. A fragment of the limestone slab that originally sealed off a burial chamber now lies in the lowermost one. All chambers are so heavily looted that even potsherds can hardly be found there. The burial chambers are orientated in such a way that a body lying on its left side in the coffin, with its head towards the north-west, would face the general east where sunrise takes place. But the body cannot have been orientated in true astronomic fashion in that direction[77].

During the removal of the debris inside the tomb, two more shafts appeared. One is located in the southern corner, and another in the western corner of the tomb chapel. The shaft in the southern corner was chosen for excavation. The outline of this shaft is rectangular (on average 1.55 m long and 0.84 m wide), but the western side slopes inward. This shaft was likewise looted, but sieving brought two button seals[78] to light, which seem to point to a late First Intermediate Period – early Middle Kingdom date for the tomb (Taf. 35a, b). Excavation of the shaft was hindered by one very large boulder, and several moderately large ones, which the Egyptians frequently threw into shafts as a means of protection from tomb robbers[79]. The upper burial chamber is located in the southeastern wall of the shaft and the top was reached at a depth of 1.30 m. Inside the burial chamber, quite a number of bone fragments were found. The chamber was heavily looted and nothing further remained of the tomb inventory. The shaft continues below the floor level of this burial chamber, so it is likely that other burial chambers will appear.

During the 2002 mission the excavation in zone 4 was quite short, and therefore all results should be considered preliminary. Further studies of the botanical, osteological, and textile material are planned.

M.D.M./L.O.d.B.

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[76] Shapes comparable to D. Bailey, *op. cit.*, pp. 65–66, pl. IX, fig. 17, 15+19 were found.

[77] On this topic see Seidlmayer, *Gräberfelder*, pp. 414–425.

[78] One is a bead-shaped button seal with the hole pierced through the length; compare to A.B. Wiese, *Die Anfänge der ägyptischen Stempelsiegel-Amulette. Eine typologische und religionsgeschichtliche Untersuchung zu den "Knopfsiegeln" und verwandten Objekten der 6. bis frühen 12. Dynastie, OBO, Series Archaeologica* 12, Freiburg 1996, p. 59, fig. 13, n. 16a (Type SF-CA). This type of button seal is mainly attested in the late 11th Dynasty, though occasionally it can also date to the First Intermediate Period. On the bottom, this seal is incised with what seems to be the representation of a fish.

The second button seal is more elaborate and has a carving of a recumbent animal on top. Which animal exactly is represented is not easy to determine. However, a few criteria indicate it could be a calf: firstly, the animal lies on its side, with its four paws bent, and the back paw protruding under the body; secondly, the animal's head is turned to the side. These are features only encountered with calves (compare *loc. cit.*, p. 66). These calf-seals are dated from the late 11th Dynasty onwards. The button seal is made in green glazed steatite, which also points to a date between the late First Intermediate Period and the early Middle Kingdom (*loc. cit.*, p. 101, 7.6).

The decoration of the bottom consists of an *ꜥnḫ*-sign flanked by two sceptres (?). This group of signs stands on top of a *nb*-sign. This decoration which can be classified under Wiese's "Glückszeichen und symbolische Hieroglyphen" (*loc. cit.*, p. 123) makes its appearance in the late First Intermediate Period.

[79] See for instance also J. Garstang, *Burial Customs of Ancient Egypt as Illustrated by Tombs of the Middle Kingdom. A Report of Excavations Made in the Necropolis of Beni Hassan During 1902-3-4*, London 1907, pp. 66, 79, *passim*.

IV.1 Description of Zones 8 and 9

The plain west of the escarpment of the Eastern Desert extends north and south of the outflow of the Wâdî Nakhla. The soil has a sandy gravelly composition. In 1995 a canal was cut through this plain to protect the village from flood water from the wadi. We have taken this canal as the dividing line between the two zones in the plain: zone 8 to the north and zone 9 to the south (Fig. 1). This subdivision is not as arbitrary as it might seem at first glance as the landscape in zones 8 and 9 is somewhat different.

In zone 9 several branches of the wadi outflow delimit spurs and 'islands' of higher ground. The most prominent of these (which we will call the western island) lies in the northwestern part of zone 9. It has a roughly triangular form with its western side bordering on the modern Coptic cemetery. This island is covered by deep craters (3 to 10 m in diameter, from 1 to 2 m deep) with dumps arranged around them. In this area seven tombs were visible on the surface in 2002. The visible remains consist of the tops of tomb shafts lined with mud brick walls. No traces of superstructures are in evidence. In fact apart from a chapel mentioned by G.A. REISNER in zone 8, none of the earlier reports mentions any. G.A. REISNER and G. DARESSY even state categorically that no visible traces of superstructures remained in their day[80].

On another island in the northeastern part of zone 9, where REISNER pitched camp in 1915, the ruins of an old *ghafir*'s hut are visible but no pharaonic remains can now be seen.

To the south of this is a roughly triangular spur, its base being the slope of the desert cliffs further east. Here also a number of pits, though far fewer in number than on the western island, betray earlier digs. No pharaonic remains are now visible on this island apart from a few stray sherds and mud brick fragments.

North of the canal (zone 8) the level of the ground is higher than to the south of it and there are no major branches of the wadi. The terrain is cut by a number of small rivulets running downslope from the cliff to the east. Near the modern canal two mastabas excavated by REISNER remain visible today: 13N80/1 (REISNER's 2001) and 12N88/1 (REISNER's 2002). Whereas 12N88/1 has largely sanded up, 13N80/1 still offers an impressive sight into its three shafts. Near the shafts of 13N80/1 we found some mud bricks apparently lying *in situ* and these might represent the visible remains of a chapel REISNER excavated here.

IV.2 Geophysical Survey

The choice of the magnetic method for geophysical research was determined by the geological conditions of the site and the character of the objects expected to be found. Since the tombs as far as known are mainly built of mud bricks, which is a material that features considerable magnetic susceptibility in comparison with sand and gravels such as occur in the substratum in zones 8 and 9, the area seemed a promising target for a geophysical survey.

The geomagnetic survey was conducted from 6–30 April 2002 by TOMASZ HERBICH with assistance from PIOTR KOŁODZIEJCZYK using two fluxgate gradiometers Geoscan FM18 and FM36[81]. A total of 72,460 m² (37,473 m² in zone 8 and 34,987 m² in zone 9) were covered by this survey with measurements every 0.25 m on north-south traverses 0.5 m apart. Measurement data was processed using geoplot 3.0 and surfer 8.0 software. Results are presented as greytone maps (Taf. 36a, b), higher values of the magnetic field being represented by lighter greytones.

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[80] All information on REISNER's work in these sectors derives from his notebooks, which are now in the Museum of Fine Arts, Boston. The present remark occurs on page 20. See also G. DARESSY, in: *ASAE* 1, 1900, p. 18.

[81] The instrument was rented on the basis of a co-operaation agreement between Warsaw University's Cairo based Polish Center of Mediterranean Archaeology and Programa de Estudios de Egiptologia, Consejo Nacional de Investigaciones Cientificas y Tecnicas, Argentina.

Once burial activities had ceased on the site, the configuration of the terrain was further shaped by both natural and man-made processes. These processes are reflected in the geophysical scans. The natural processes include a series of small rivulets caused by water flowing down the slope of the cliffs. Water carried material of high magnetic susceptibility. As a result the magnetic map clearly reflects the course of these rivulets (Taf. 36a). In zone 9 the original configuration of the plain has changed by a much stronger discharge of water than in zone 8. The boundary between the flow area and the western island is reflected in the magnetic map as the boundary between an area of considerable changes of intensity and one with only a slight scale of changes of intensity (Taf. 36a, b).

The most distinctive anomaly in zone 9 is a long, linear structure 3–4 m wide following a NWW-SEE orientation practically across the entire surveyed area. To investigate the nature of this anomaly a trial trench (sector 6) was opened by H. WILLEMS. The magnetic anomaly corresponds to a road with a surface in alluvial mud. The mud overlies an ancient, plane surface level and thus does not represent the natural fill of a gully. Several phases of application of new mud layers were visible suggesting that this road was used and maintained for some time. This road is aligned straight to the mouth of the wadi, and may well relate to the path ascending the escarpment to zones 4 and 2. This suggests that it either belongs to the infrastructure of the Old and Middle Kingdom cemetery or to the later quarries in the region.

The anomaly 10N85/1 corresponds to a tomb that is partly visible at the bottom of a crater. A much stronger anomaly of similar shape and orientation is situated in square 10O22. This anomaly has been registered in an area between two craters. The high amplitude of values suggests that the top of the object lies close to the surface. Surrounding this anomaly a faint and narrow rectangular anomaly can be seen and can be interpreted as the image of a surrounding wall.

Just south of these anomalies two others of rectangular form and aligned with the surrounding wall can be seen in square 10O13. On the spot of the eastern anomaly a depression in the surface is visible; where the western of the two is, the ground is flat. An anomaly of apparently square shape (3 to 4 m sides) in square 12N10 appears to be of special interest. It is situated in an area where the land configuration has been changed by the water flow and hence has escaped notice by earlier investigations.

To the north of the canal (zone 8) only one anomaly corresponding to an archaeological structure can be traced with certainty on the magnetic map in square 11O18. It is rectangular in outline and undoubtedly corresponds to a tomb. The presence of a crater at the surface indicates that it has already been explored.

A circular anomaly in square 11O54 corresponds to a dump surrounding a deep crater. It is caused by considerable quantities of mud brick still visible in the dump. The long linear anomalies correspond to recent irrigation ditches.

T.H./C.P.

IV.3 Surface Survey

The aim of the survey carried out in March–April 2002 was to obtain a first impression of the chronological distribution of the surface ceramics[82]. It was immediately clear that sherds did not occur

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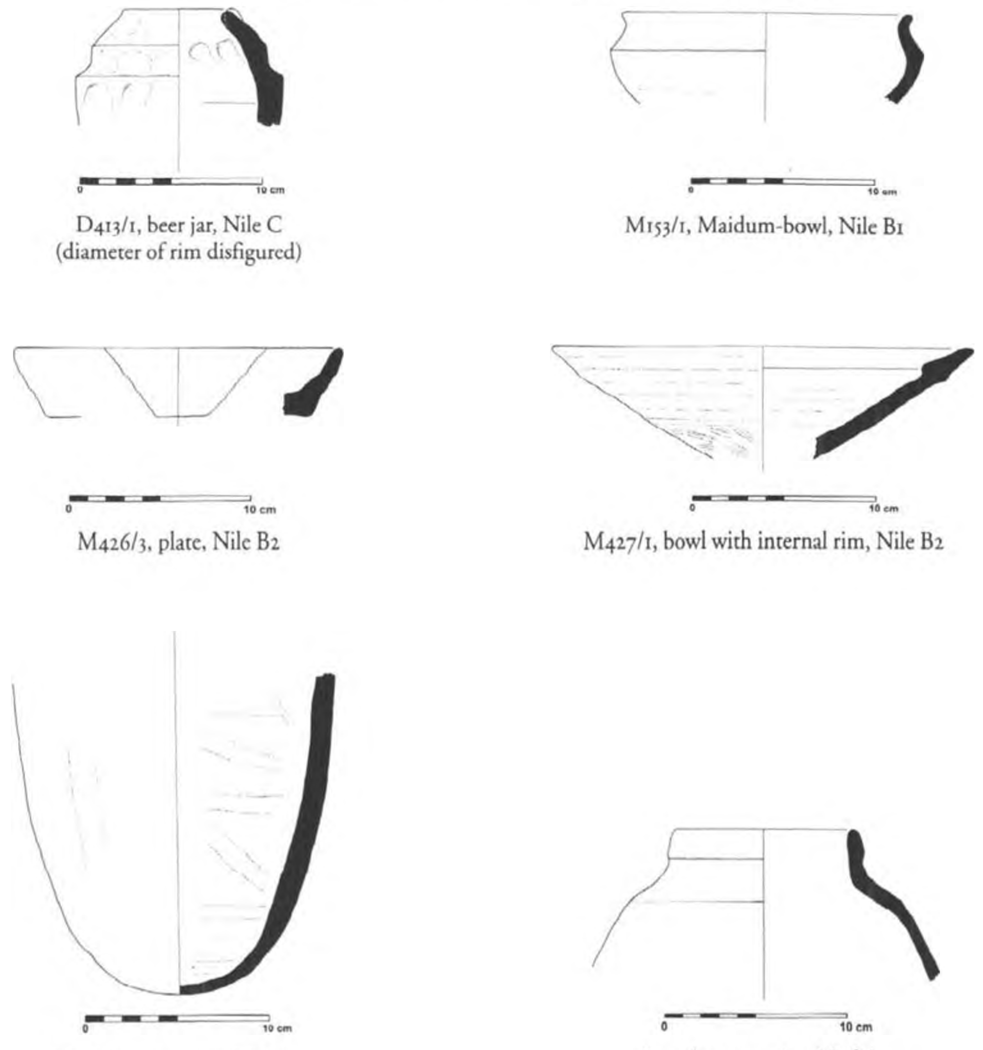
[82] Analysis of the survey material was carried out by JANINE BOURRIAU, PETER FRENCH, STAN HENDRICKX and LIES OP DE BEECK.



D413/1, beer jar, Nile C
(diameter of rim disfigured)

M153/1, Maidum-bowl, Nile B1

M426/3, plate, Nile B2

M427/1, bowl with internal rim, Nile B2

M428/1, storage jar, Marl A4

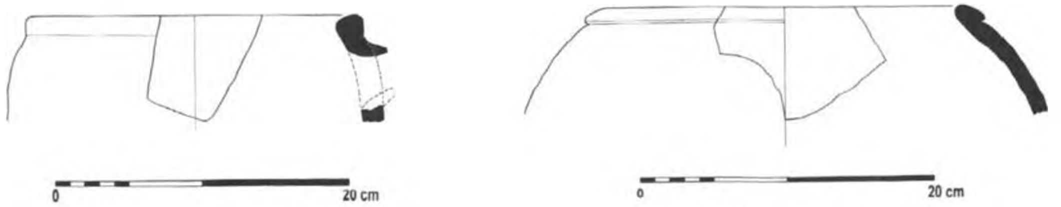
L402/1, storage jar, Marl A3

Fig. 6: Early Old Kingdom pottery from the surveys

in huge quantities in the plain. Therefore, we decided to select a few rather large survey areas and sampled these as exhaustively as possible (Fig. 1, map).

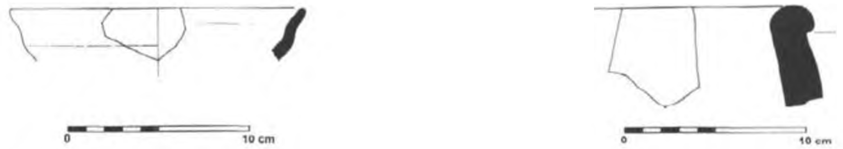
A total of more than 5500 sherds have been retrieved and analysed. Diagnostics were kept for full description and drawing. The main results will be summarized and the periods represented by the ceramics discussed.

Both in zone 8 and zone 9 two areas were selected for the pottery survey (see map, Fig. 1). The first survey covered the southern part of zone 9 between the excavation house and the lower reaches of the *gebel*. The low sherd density there is not surprising, as the football pitch of the local children is located here. The majority of the material consisted of very small, undatable body sherds and in this case, a distinction could only be made between wheel-thrown and hand-made pottery. The diagnostic sherds consisted of Coptic (Fig. 12, K3/1), Old Kingdom and Modern pottery with a few Middle King-



M114/1, spouted vat, Nile B2

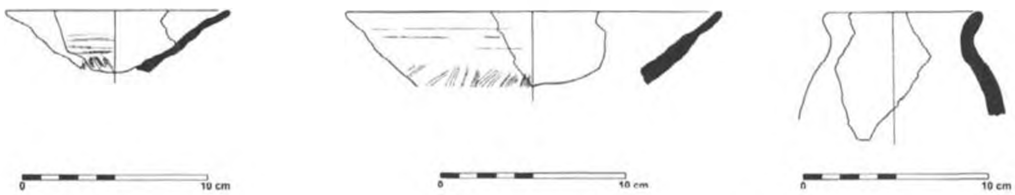
SA142/1, vat with restricted mouth, Nile B2



P308/1, out-turned bowl, Nile B2

S104/1, large vat, Nile C

Fig. 7: Pottery from the surveys



L206/1, small cup, Nile B2

L208/1, up, Nile B2

P214/1, drop-shaped jar, cup, Nile B2, wet-finished on the interior and exterior

Fig. 8: First Intermediate Period pottery from the surveys

dom and Late Dynastic sherds (Fig. 11, L22/2; L33/1). The distribution of the material showed no obvious patterning.

More pottery was found during the survey on the western island in zone 9, which as we have already mentioned contains mud brick tombs. Again, Coptic pottery was well represented, but Old Kingdom and Middle Kingdom material (Fig. 9, I204/1; K206/1; P208/1; L212/1) as well. A small group of sherds could be attributed to the First Intermediate Period (Fig. 8, L206/1; L208/1; P214/1). This zone was selected for further excavation (see discussion below). The density of sherds in this area is still rather low, but more sherds occur than in the first survey area near the excavation house.

The third survey covered the area just north of the canal (zone 8), from around mastaba 13N80/1, REISNER's 2001[83], to the west. Again most of the sherds belonged to the Coptic period (Fig. 12, SA129/1) and the Old Kingdom (Fig. 7, M114/1; SA142/1; S104/1). The Middle Kingdom was only scantily represented and spatially, finds datable to this era cluster at the edges of the modern canal that runs through the area, suggesting that Middle Kingdom layers have been cut through when the canal was dug. A few Late Dynastic sherds were also found (Fig. 11, H153/1).

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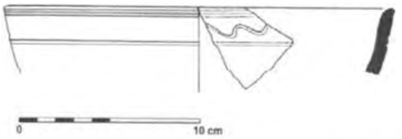
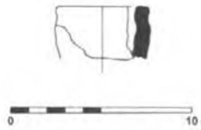
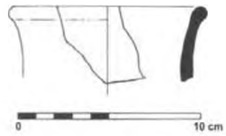
[83] REISNER, *Diary 1915*, pp. 18–21.



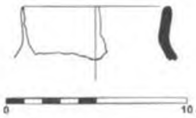
I204/1, bowl with incised decoration, Nile B2



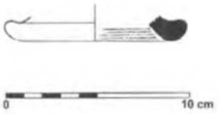
K206/1, small tubular bread mould, Nile B2



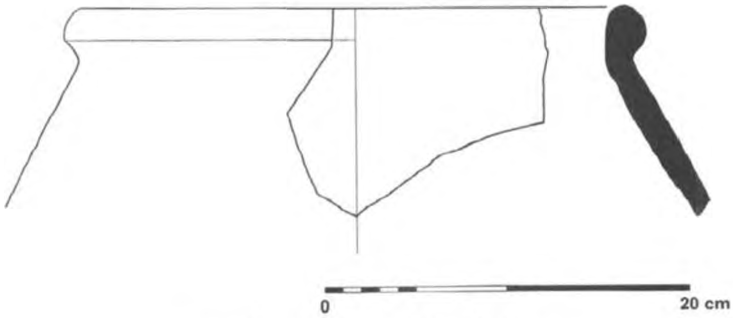
P208/1, jar with cylindrical neck, Nile B2



L212/1, jar with cylindrical neck, Nile B2

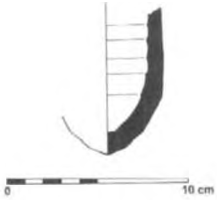


L307/1, pot-stand, Nile B2



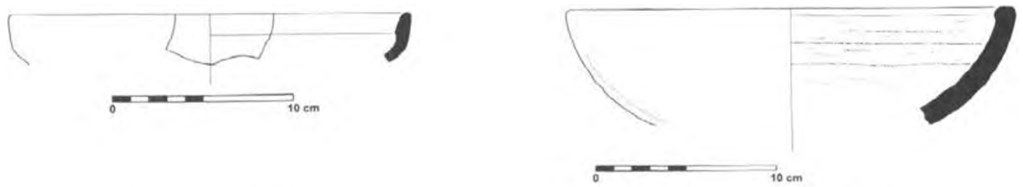
S320/1, large wide-mouthed jar, Marl C

Fig.9: Middle Kingdom pottery from the surveys



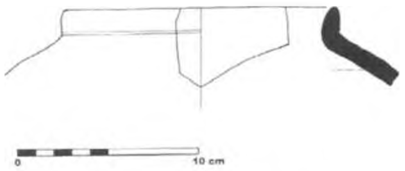
P.315/2 cylindrical beaker, Nile B2

Fig. 10: New Kingdom pottery from the surveys



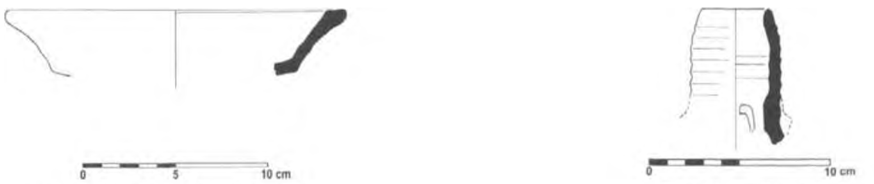
L22/2, carinated dish, Marl A4

L33/1, bowl, Nile C



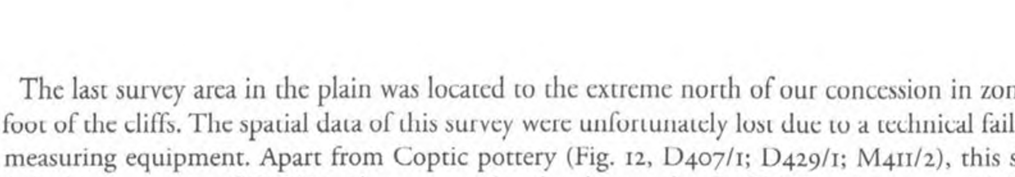
H153/1, large storage jar, Nile B2

Fig. 11: Late Dynastic pottery



D407/1, carinated bowl, Nile B1

D429/1, qulla, Nile B1



K3/1, cooking pot, Nile B1

M411/2, toe of Egyptian amphora, Nile silt

SA219/1, imported amphora (Peacock and Williams class 44B)

Fig. 12: Coptic pottery from the surveys

The last survey area in the plain was located to the extreme north of our concession in zone 8 at the foot of the cliffs. The spatial data of this survey were unfortunately lost due to a technical failure of the measuring equipment. Apart from Coptic pottery (Fig. 12, D407/1; D429/1; M411/2), this survey yielded a large amount of Old Kingdom material and a cluster of early Old Kingdom material datable to the 3rd or early 4th Dynasty (Fig. 6, D413/1; M153/1; M426/3; M427/1; M428/1; L402/1). This concentration of early Old Kingdom material at the foot of the cliff belongs to a cemetery that will be investigated during one of the next campaigns.

Although the results of the survey are only preliminary, a few conclusions can already be drawn. As was to be expected, no settlement remains or pottery concentrations indicating settlements have been found in the plain. The only settlement ceramics were Coptic, but these were not in primary position as they had washed down from the Coptic hermitages installed in the pharaonic rock tombs or on top of the hills in which the latter have been dug.

As Coptic pottery has been found up to 400 m from the foothills, one has to take into account significant displacements of sherds when interpreting the results of the survey. Most of the scattered Old Kingdom and Middle Kingdom sherds found in the plain, may therefore be considered to originate from rock tombs of the same periods. The only more or less *in situ* concentrations of Middle Kingdom sherds occur in the zone of the modern canal and on the western island and confirm the presence in this area of Middle Kingdom tombs.

The early Old Kingdom material was found in its original position and represents a period not attested before at Deir al-Barsha. This is the oldest phase of occupation of the site known at present.

The near complete absence of New Kingdom material is remarkable. There are no New Kingdom rock tombs at the site but there are quarries dating to that period. The one New Kingdom sherd found in zone 4 is to be related to quarry activity in quarry 20, which has a stela of the time of Tuthmosis III. The absence of pottery dating to the Amarna period is particularly striking as the quarries were definitely used at that time and the site of Amarna itself is at a distance of only a few kilometres. One might even suppose that the use of Deir al-Barsha was at that time largely restricted to quarry activity.

L.O.d.B./S.H.

IV.4 Excavations in Zone 9 (Western Island)

No archaeological report worthy of the name has ever been published on the remains in this area and the stratigraphy in the plain was unknown at the start of our work. Also the magnetometric survey was still in progress during the 2002 season so that we could not use its results in choosing our trenches. Therefore we selected a tomb visible on the surface (10N85/1) and its immediate surroundings on the western island, with the aim of obtaining a first impression of the architecture of the tombs in this area, as well as of the stratigraphy[84].

Two 5 x 10 m trenches (sectors 1 and 5) and three of 5 x 5 m (sectors 2–4) were opened to the north and west of tomb 10N85/1. These trenches contain a number of the surface features so characteristic of the western island: a pit with the top of a mud-brick shaft lining (tomb 10N85/1) visible in it (on the border of sectors 1 and 5); a pit without visible architectural remains (in the centre of sector 3), an embankment between two pits (sector 1) and an area of flat and undulating ground (sectors 2, 4 and the north part of sector 5).

The depression in sector 3 did not yield any architectural remains. It was dug in the wadi sediments and filled up with loose sand and a few mud brick fragments. Possibly this is a search pit, and any features it may have once contained must have been rather small.

The main stratigraphic feature in the other sectors was a hard layer of a dark clayish material, sometimes several centimetres thick, and sometimes barely visible in the section. This layer in most places lies about 10 to 30 cm below the surface and follows the general relief of the terrain. It probably consists of eroded mud brick from the higher parts of the shaft lining of the tomb or from a possible superstructure. The soils above and below this layer were quite different: whereas the soil on top of it consists of loose surface sand covering heavily disturbed deposits of mud brick fragments mixed with large amounts of archaeological debris, the layer below it was much more compact. In this compact layer a number of small pits (less than 50 cm diameter) had been dug, in some cases possibly by animals. The fill of these pits consisted of very small fragments of artifacts mixed with enormous amounts of small rodent bones. Apart from the fill of these pits this layer was almost sterile.

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[84] Besides CHRISTOPH PEETERS these excavations were carried out by DAVID DEPRAETERE and HARCO WILLEMS.

The eastern part of the excavation is formed by the brick-lined tomb shaft 10N85/1 (Figs. 13 and 14). It measures 3.30 m north-south and 1.32 m east-west at the bottom and has a maximum depth of 5.10 m. No traces of a construction pit were found. The subsoil was apparently sufficiently stable to allow excavating a pit with vertical sides to the depth needed for the tomb shaft[85]. The shaft still stands 2 to 3 layers of bricks above the original surface. A working hypothesis is that the tombs in this zone had a small superstructure consisting of the shaft lining walls standing above the surface and forming a small mastaba.

The brick bonding in the shaft consists of headers alternating at irregular intervals with stretchers, the walls having a thickness of four bricks. The walls of the shaft are plastered over with mud plaster, but this is only preserved in the lower half, where several erosion marks indicate the levels to which the tomb has stood open for some time before being filled in further.

In the north at a depth of 1.75 m below the surface lies the top of an arched passage to a burial chamber. This arch consists of four superimposed arches of headers. This northern burial chamber was simply hollowed out in the soil matrix sand. This was apparently possible as the substratum is very hard here owing to the abundance of lime inclusions in the sand. This room has collapsed, only a small ledge of the ceiling being preserved.

About 3.45 m below the surface is the top of a passage to a burial chamber south of the shaft. This passage is surmounted by an arch of ten layers of headers and has a limestone lintel spanning the passage. The doorway was blocked with two limestone slabs. The western one is still *in situ* and has traces of a mud brick wall in front of it. The lintel has a recess in its underside to receive the two blocking slabs. The eastern slab had been pulled over to get access to the burial chamber. Also a robbers' hole had been cut between the lintel and the brick vault. The southern burial chamber is a substantial room of 4.10 m north-south and 2.22 m east-west covered by a mud brick true vault, which reaches a height of 3.05 m. The bonding of the walls consists of stretchers alternating with headers, that of the vault of stretchers only. No traces of plaster are visible. Robbers' holes indicate that the walls are at least four bricks in thickness (all stretchers).

The southern part of the floor of the shaft and the floor of the burial chamber gently slope downwards to the south. This slope is also characteristic of many tombs on the Middle Kingdom governors' plateau[86], but also appears at other sites of the period[87].

The floor of the southern tomb chamber is paved with large limestone slabs. In the southern part of the room three stones were set up so as to form a U-formed receptacle for a coffin, the space between this receptacle and the walls being filled in with mud brick and plastered over. The northern part of this

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[85] This was confirmed when a local workman dug a well next to the expedition house in a similar substratum. The well was dug to a depth of 8 m without any lining and with no stability problems.

[86] Amongst them: A. Bey Kamal, in: *ASAE* 2, 1901, pp. 20 (21), 208.

[87] E.g. J. De Morgan, *Fouilles à Dahchour. Mars–Juin 1894*, Wien 1895, fig. 19; G. Brunton, *Qau and Badari* I, London 1927, p. 45 and fig. XXIV, 31–33.

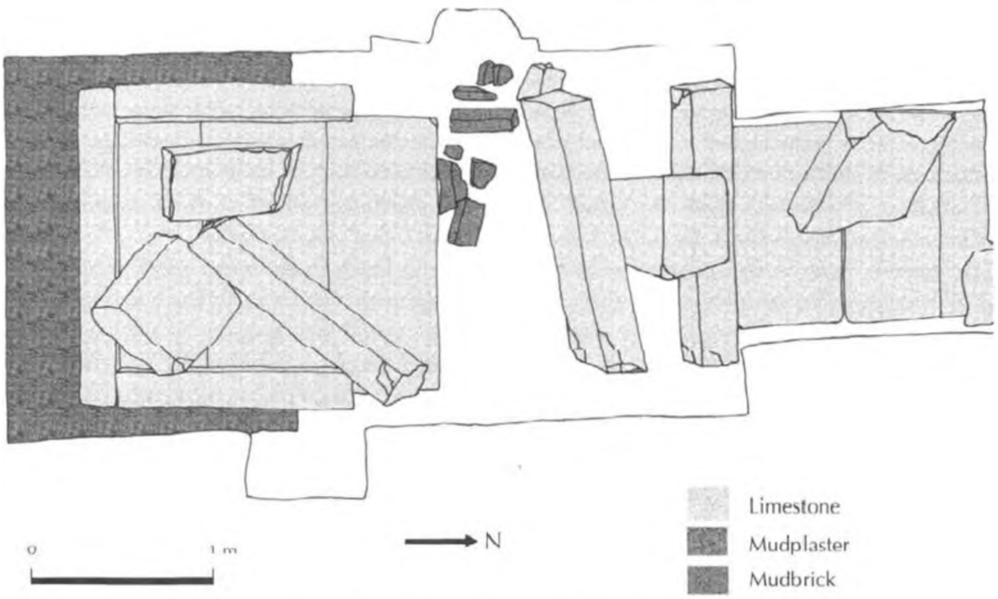

Fig. 13: Preliminary plan of the southern burial chamber of tomb 10N85/1

receptacle, including the floor, has been destroyed by looters, who also made a hole each in the east and west walls of the room without completely breaching these walls.

The tomb chambers had been extensively emptied in the past. In fact the filling consisted of wind-blown sand with very few finds in it. Pottery was almost completely absent from the fill, indicating a very thorough emptying in the past. On the other hand there were wasps' nests and an abundance of rodent bones, indicating that the tomb had been left standing open after it had been excavated or robbed[88].

The chief finds in the tomb and in the dump next to it are very fragmentary, but nevertheless give an impression of the tomb content. Considering the fact that no other tomb was found in the first 10 m west of tomb 10N85/1 and that the finds in sector 1 occurred in quite distinctive concentrations near the shaft mouth (i.e. plunderers' dumps not spread out by post depositional processes) there is little ground for doubting that the material derives from this tomb.

A crystalline limestone eyeball of an eye inlay with a curved front and wedge shaped reverse (0072/42) indicates the presence of a mummyform coffin or a mask. A wooden plank with the signs *ḏd mdw* (0016/1/1) are probably the remains of a canopic chest or of a coffin. The detail in the *d*-sign indicates a high quality of manufacture. A substantial amount of other small coffin fragments were also present. Some of these show that the coffins were decorated on the inside with Coffin Texts. Fragments of two shabtis were found. The more complete of the two bears a striking resemblance to ones found by G. Daressy in zone 2[89], representing a wrapped mummy and bearing no text. Although a large amount of wood fragments were found, most of these were parts of large wooden boards, sometimes having

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[88] Kamal also mentions an abundance of these mice bones in other tombs in the plain (in: *ASAE* 2, 1901, p. 207).

[89] G. Daressy, in: *ASAE* 1, 1900, p. 28, P. Newberry, *Funerary Statuettes and Model Sarcophagi*, Fasc. 1 (*Catalogue Général du Musée du Caire*) nos. 46530–48273, p. 381, no. 48502; *Ibid.*, Fasc. 3, Pl. XXIII.

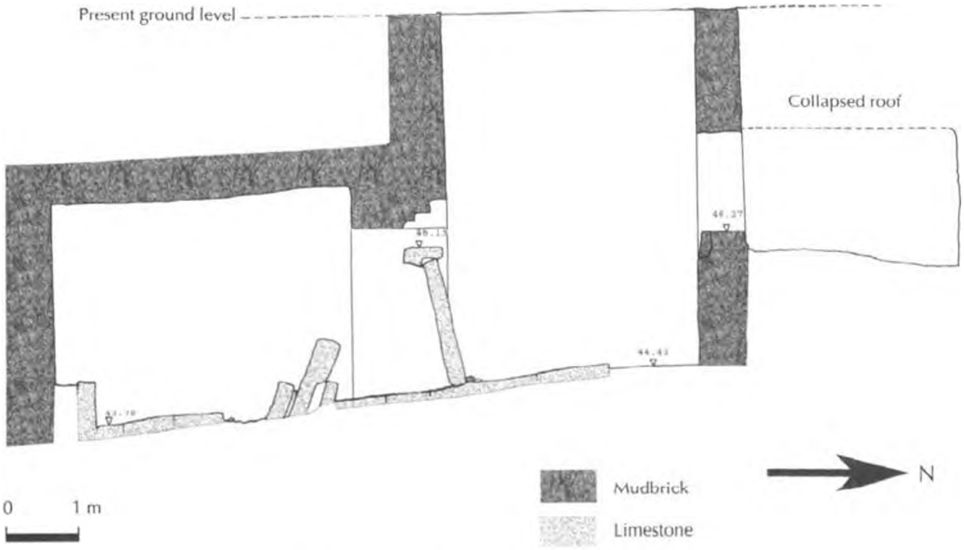

Fig. 14: Preliminary section of tomb 10N85/1

fragments of decoration on them, so that we can assume that no tomb models were present. An assemblage with these elements would be datable to the later 12th Dynasty but a definitive dating must await further analyses of the recovered material and of the pottery[90]. A preliminary assessment of the pottery indicates however an early Middle Kingdom date.

C.P.

V. Research in the Quarries

V.1 Earlier Research and Present Aims

The quarries of Deir al-Barsha have never been intensively studied. Only a handful of publications pay more than passing attention to them. The most important of the quarries were briefly discussed for the first time in G. Willoughby Fraser's report of the Wâdî Nakhla, *i.e.* our zone 5[91]. He points out that the chief concentration of quarries is found east of what he calls the "Bab", a barrier where the wadi floor rises steeply and where the north and south slopes almost meet. From this point eastward he notes the existence of several large underground quarries, the largest of which, which is nowadays locally known as Abû Gamûsa (quarry 8), not even being fully surveyed by him. The ceilings of several quarries are said to be "lined out in red with demotic notes and marks". Some pictorial graffiti are also described in some detail, and Fraser mentions the repeated occurrence of cartouches in Demotic with the name of Nectanebo. The Abû Gamûsa quarry is assumed to be of Ptolemaic date, and a remarkably accurate estimate of its volume as being "more than 250,000 cubic metres" is given[92]. Other quarries on the

[90] J. Bourriau, *Patterns of Change in Burial Customs*, in: S. Quirke (ed.), *Middle Kingdom Studies*, New Malden 1991, pp. 11–12.

[91] *El Bersheh* II, pp. 55–66.

[92] *Loc. cit.*, pp. 55–56.

north and south slopes are described in considerably less detail. **Fraser** does however mention the stela of Tuthmosis III in quarry 19 of our zone 2[93] and another of Amenhotep III in our zone 6[94].

A short while after, some of the Demotic and Coptic graffiti in the quarries were published by J. **Clédat**[95]. They are referred to in passing in other publications, most notably in G. **Roeder**'s archaeological report of the German excavations at Ashmûnein[96]. On the whole, however, they have hardly been paid attention to[97]. A brief note by D. **Devauchelle** is a notable exception. This author draws attention to the fact that the names in some Demotic graffiti in the quarries at Deir al-Barsha coincide with names attested in quarry graffiti in al-Maasâra[98].

The wadi was visited again in 1988 by H. **Willems** and O.E. **Kaper**[99]. The preliminary report of their survey for the first time drew attention to the fact that the largest quarries in the wadi and the tombs of the Middle Kingdom nomarchs (which were also damaged by quarry activity) exploited the same stratum of limestone. The various types of quarry marks and Demotic graffiti were briefly described, and the sheer size of the quarries led to the conclusion that "many people must have worked here for a long period of time"[100]. This assessment may have to be reconsidered as a result of this season's results. The 1988 survey also led to the discovery of various traces of Coptic presence in the wadi, undoubtedly dating back to a period when monks retreated here. The most remarkable find was the rediscovery of a Coptic graffito concerning monastic life[101]. The survey also led to the discovery of several transport roads associated with the quarries in zones 4, 6 and 7 and of a few huts, possibly dwellings of quarrymen.

Already in the early 1980s D. and R. **Klemm** had paid a visit to the site within the framework of their study of Egyptian quarries, but this was only published in the early 1990s. They offered a brief description of the site, describing the most important quarries in the wadi and to the south of its mouth. Attention has also been paid to the petrography of the local limestone on the basis of thin-sections and X-ray fluorescence spectrometry[102]. Detailed knowledge obtained in this way has revealed that the properties of the rock in the 'Amenhotep III quarry' (quarry 15A) on the south of the wadi differ slightly from those of the rock deeper in the wadi. Their study of the development of chisel marks in other quarries elsewhere in Egypt led to an attempt to date the Deir al-Barsha quarries. Those in the wadi are suggested to date back to as early as the New Kingdom, while those in zone 7 are argued to date to the Middle and New Kingdoms[103]. In the present campaign, in which they also co-operated, some of these dates have been re-evaluated.

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[93] *Loc. cit.*, p. 62. This stela had already been published earlier by S. **Sharpe**, *Egyptian inscriptions from the British Museum and other sources* II, London 1855, pls. 33, 47.

[94] *El Bersheh* II, pp. 63–64. It had been discovered a few years earlier by A.H. **Sayce** (in: *PSBA* 9, 1887, pp. 195–197).

[95] J. **Clédat**, in: *BIFAO* 2, 1902, p. 69, pls. VI–VII.

[96] G. **Roeder**, *Hermopolis 1929–1939*, Hildesheim 1959.

[97] The graffiti in the nearby quarries from Deir Abû Hinnis, which date in part to the Amarna period, have been studied in somewhat greater detail (A. **Gasse**, *Rapport préliminaire d'une mission épigraphique à Deir Abou Hennes*, in: *ASAE* 69, 1983, pp. 95–102).

[98] D. **Devauchelle**, *Notes sur les inscriptions démotiques des carrières de Tourah et de Masarah*, in: *ASAE* 69, 1983, pp. 169–182.

[99] **Willems**, in: *GM* 110, pp. 75–95.

[100] *Loc. cit.*, p. 77.

[101] A first (partial) edition of this text (with translation) was published earlier by A.H. **Sayce** (in: *PSBA* 9, 1887, pp. 195–197). See now O.E. **Kaper**, in: W.H. **van Soldt** (ed.), *Pap uit lemen potten. Papers in memoriam of Mia Pollock*, Leiden 1991, pp. 38–41.

[102] **Klemm**, *Steine und Steinbrüche*, pp. 122–123.

[103] *Loc. cit.*, pp. 118–124.

A second petrological analysis was later carried out by J. HARRELL[104]. A brief account of the geological stratigraphy of part of the wadi was described in the unpublished report of F. SCHOKKING and CHR. MAUGENEST prepared during the 1992 campaign of the mission of Leiden University[105].

The above results show that close inspection of the geological properties of the rock help us to understand the degree of expertise attained by the ancient architects and quarrymen. The good preservation of roads and other parts of the infrastructure of the quarries, of hut concentrations and of large amounts of pictorial and Demotic graffiti offer very interesting possibilities for analysing the functioning of limestone exploitation in antiquity. Study of these remains forms a major focus of attention in our project.

The project aims at investigating all possible aspects of the Deir al-Barsha quarry system, including variation in geology, general appearance, and exploitation techniques of the various quarries. Presence or absence of quarry marks, drawings and textual evidence will be recorded and their chronological and spatial distribution will be studied. Detailed maps of all quarries will be integrated in the master plan of the site.

H.W.

V.2 Geological Survey of the Quarry Area

Stratigraphically all units used for ancient tomb constructions or quarry activities are part of the Bani Hasan member of the Minia formation at the border of the lower to middle Eocene of the Palaeogene period of the Tertiary system. North of Sheikh ʿIbâda until Bani Hasan these units still form the main parts of the escarpment including rock tombs and quarries, but they are overlain by the nummulites-limestones of the Samalût formation of the middle Eocene Mokattam group. These latter are absent at Deir al-Barsha.

This Bani Hasan member was intensively mined south of Bani Hasan itself, but also around Sheikh ʿIbâda and especially at Deir Abû Hinnis and Deir al-Barsha, where extensive gallery quarries occur all along the escarpment and deep into the adjacent wadis. One of the most prominently mined wadis of this region is Wâdî Nakhla.

The Bani Hasan member in Wâdî Nakhla consists of a rhythmic layering of cycles built up by more or less dense packstone-wackestone strata, passing upwards into coral beds, weathering in a type of sponge structure and interstitially filled with packstone-wackestone biosparite (a fine-grained secondary calcified original sedimented micrite). In all, 17 such cycles could be distinguished in this Wâdî Nakhla sequence, of which only about three attracted the interest of the ancients, due to their relative thickness and resistivity to deterioration. Only one of these layers was intensively mined or used for tomb construction during various periods of Egyptian history: layer 12, according to our numbering from the base of the wadi toward the top of the quarry activities.

The main petrographic units illustrated as micrographs in Taf. 38a, b represent the high quality wackestone, generally mined in the main quarried layer (No. 12 and 13 of our Wâdî Nakhla sequence). The biomicritic matrix (dark) is filled with fossil debris, which can no longer be determined in terms of palaeontology.

Taf. 38c shows remains of fossil debris of shells and echinoderms within a biosparitic matrix, as well as a nummulitic ghost structure (middle, right) from cycle 6 of the northern flank of Wâdî Nakhla.

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[104] J.A. HARRELL, *Ancient Egyptian Limestone Quarries: a Petrological Survey*, in: *Archaeometry* 34, 1992, pp. 195–211.

[105] F. SCHOKKING, *Geotechnical Stability Investigation of the Ancient Burial Site of Deir el-Bersheh, Province of Minia, Egypt*, Haarlem, Geological Survey of the Netherlands, Project Number 5103, 1992.

This type of packstone and that of Taf. 38d, where the nummulitic fossils are somewhat better preserved, also occur in lenses in the dense wackestones generally worked in gallery quarries and tombs, but also as illuviation into the interstitial space of the coral beds, forming the upper part of a cycle.

The coral beds appear outcropping like enlarged sponge structures, but well preserved corals are rather rare (Taf. 38e) due to intensive sparitic recrystallization especially of the very porous coral beds, thus dissolving most of their original structure, which mostly occur only as ghost-structures hard to identify (Taf. 38f).

D.K./R.K.

V.3 Archaeological Survey

a. Location of the Quarries and Related Features

Quarry activity at Deir al-Barsha occurs in many different places of the site: in the Wâdî Nakhla (zone 5), at its mouth, along the escarpment of the eastern desert cliffs (zones 2–4; 6–7), and in places on top of the plateau east of the escarpment (zones 1, 6). Quantitatively the main activity clearly took place in the Wâdî Nakhla. This wadi is orientated from north-west to south-east and runs parallel to the larger wadis further south closer to al-Amarna: the Wâdî al-Barshâwi, the Wâdî Abû Hasah al-Bahari and the Wâdî al-ʿUmrani. The quarries inside the wadi are all subterranean galleries except for some open-air workings near the top of the northern and southern slopes at its mouth, along the north-western (quarry 18) and south-western (quarry 14) edges. As we have just seen, most of these quarries exploit the limestone layer 12.

On the southern wadi slope the high quality limestone of layer 12 has been exploited by an open-air quarry at the mouth of the wadi (quarry 14) and, more extensively, by a partly collapsed subterranean gallery on the western edge of the plateau (quarry 15A) and a neighbouring gallery (quarry 15B). Some poorly preserved smaller quarries exist.

After a gap the large, subterranean Nectanebo quarries 1–5 start with a bent caused by a tectonic fault, dipping steeper toward the east. This exploitation of the layer continues with another shallow gallery-quarry (quarry 7) and a deeper one (quarry 34) until the wadi floor is reached. This point is marked by the enormous Abû Gamûsa quarry (quarry 8) at the far end of the wadi, and the adjoining quarries 35 and 11, both of which are connected to quarry 8. From this point westward the layer ascends the northern wadi flank[106], again with a gap (and interrupted by a less prominent fault) until the large gallery quarry 6 is reached. This part of the layer also inclines toward the east and bends into almost horizontal position at the northern continuation of the already mentioned tectonic fault. From there the layer continues more or less horizontally with a few smaller quarries until the mouth of the wadi is reached. This area has been exploited initially for the construction of the tombs of the Middle Kingdom nomarchs, but later as well for the larger subterranean quarry cutting away the stratum behind them (quarry 20), the smaller and shallower quarries towards the north (quarries 21–26) and the large quarry to the south-east of the tombs (quarry 19).

A short survey north of quarry 26 following the western escarpment of the plateau taught that the same stratum of limestone was extracted all the way north towards Deir Abû Hinnis, where other ex-

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[106] Passing some smaller subterranean quarries (9–11). In this area, the higher layer 13 was also exploited for quarry activity, leaving a few cave-like workings side by side (quarry 12).

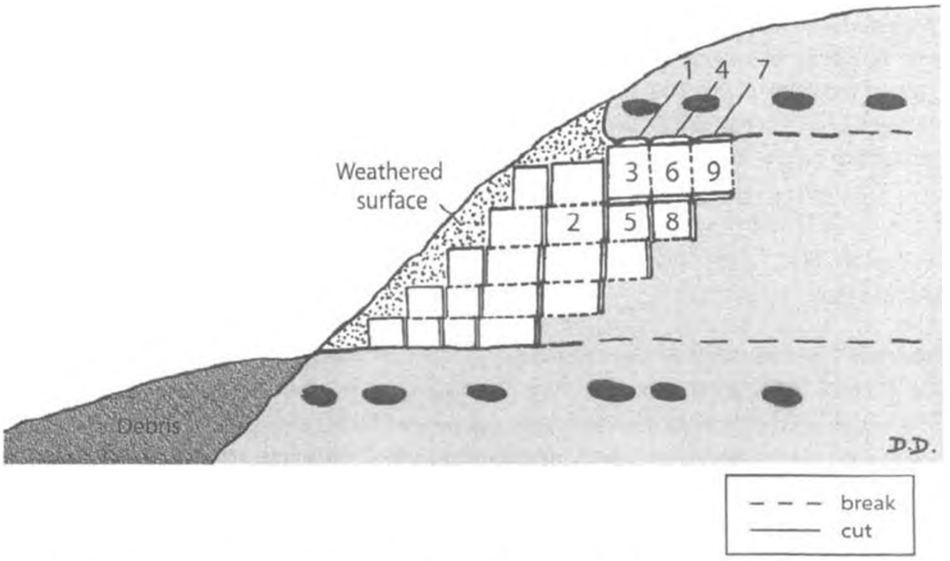

Fig. 15: Tentative reconstruction of the exploitation of quarry 2. Beginning as a small open-air quarry, the technique of cutting the top layer changed once the subterranean extraction started. The numbers refer to the consecutive actions taken by the quarrymen while they proceeded deeper into the stratum

tensive subterranean galleries are present[107]. To the south of quarries 15A and B, only open air exploitation is found: quarry 16 at the top of the plateau, and quarry 17 just underneath. At the level of the early tombs in zone 7 limestone was extracted in the two subterranean quarries 30–31. The terrace of the Middle Kingdom tombs as well as the early tombs below them have also been subjected to quarry activity, leaving some of the graves severely mutilated. A reconnaissance on top of the desert plateau has proved rewarding. To the south of quarries 1–5, the open-air quarry 32 was discovered near a geological fault. South-east of quarry 14 other remnants of less extensive open-air workings were found (quarry 36). In zone 1 a large open-air quarry (quarry 33) lies south-west of the two deep tomb shafts discussed on pp. 255f. (*cf.* Fig. 1). The road mentioned in Fraser's report[108] and shown on his plan is most probably part of the infrastructure of this quarry. At a small distance north of this road, other small and shallow open-air workings were found (quarries 27–29). Similar workings were located along a depression south of the large tomb shafts.

A concentration of huts lies immediately at the foot of the dump in front of quarry 16 (zone 6), others are dispersed on the slope towards the south. The huts consist of circular walls made of crystalline limestone boulders of an almost black colour (for which, see pp. 271f.), which litter the top of the limestone plateau in this part of Egypt. They resemble the single-roomed circular or crescent-shaped New Kingdom huts at Hatnub[109]. Their entrances mostly seem to face south (away from the prevailing north wind). Not much artefactual evidence has been found yet to date the constructions but we assume that they are related to the quarry-activities in this area. An assemblage of c. ten relatively large examples is located on the plateau above quarry 16. A larger concentration lies further south, above the southernmost extremity of quarry 17. A broad desert road is visible running north-south to the east of the huts on top of the plateau. It is very similar to the roads found during the Amarna survey[110]. It was made by clearing a track of surface stones which were then used to mark the track on both sides. B. KEMP suggests that such roads might have been used by desert police patrols[111].

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[107] A. Gasse, *op. cit.*, pp. 95ff.

[108] *El Bersheh* II, p. 57.

[109] I.M.E. Shaw, in: *Amarna Reports* III, London 1986, p. 202, fig. 10,7; Id., in: *Amarna Reports* IV, London 1987, pp. 164, 167, fig. 13,6.

D.D./M.D./D.K./R.K.

b. Survey of the Quarries

Chisel Marks

An important but little studied aspect of the exploitation techniques used in Egyptian quarries are chisel marks. R. and D. KLEMM were the first to establish a relative chronological sequence, based on their collection of evidence from the sandstone quarries at Gebel el-Silsila[112]. They have argued that this sequence should be applicable to limestone quarries as well, although they make allowance for differences due to the different characteristics of the stone[113]. D. ARNOLD's study on stone masonry also pays attention to chisel marks[114] although it concentrates on the types of chisels used rather than on the dating of the marks themselves.

The descriptions of the chisel marks in the above studies would date the quarry-activities at Deir al-Barsha to two different time spans. Chisel marks resembling those attributed to the Old Kingdom/Middle Kingdom[115] concentrate in the quarries located at the wadi mouth (including the Middle Kingdom terrace), the western face of the plateau and the open-air quarries above the latter. These chisel marks are 0.7 cm wide and vary in length (the longest are ca. 20 cm long)[116]. They are relatively straight but irregularly distributed over the surface. As a result the walls and ceilings are relatively uneven. Textual and other evidence, however, indicates that at least some of these quarries should probably be dated later than might be expected on the basis of the chisel marks. Thus in quarry 19, there is the presence of the stela of Sennefer dated to year 33 of Tuthmosis III. Red ochre guidelines on some remaining roof surfaces and the possible existence of a demotic graffito, both in quarry 20, moreover suggest quarry activity in the Late Period. At any rate quarrying on the Middle Kingdom terrace and its nomarchal tombs must have taken place after the abandonment of the cemetery in the late 12th Dynasty[117]. In quarry 15B and in zone 2 similar chisel marks occur in relation with a technique of detaching the blocks by a row of cylindrical holes[118], also discovered in quarries said to date to the Amarna Period during recent investigations near Sheikh Sa'id. Other observations in quarry 15B confirm this date. On the ceiling in the front part ochre lines form a pattern of small rectangles, the size of which apparently corresponds to *talatat*-blocks. Moreover, one such block completely chiselled out but not detached from the mother rock was found *in situ*. Its dimensions of ca. 56 x 25 x > 18 cm are those of the *talatat* quarries recently discovered near Sheikh Sa'îd[119]. The stela of Amenhotep III at the entrance of the adjacent quarry 15A, which was almost certainly exploited in the same period, also points to a New Kingdom exploitation. The destruction of the name of Amun in the king's name and of the name of Thebes[120] suggests that the adjacent quarry 15B was still used, or at least visited, in the Amarna period.

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[110] B. KEMP, *Resuming the Amarna Survey*, in: *Egyptian Archaeology* 20, 2002, p. 10 (photo).

[111] *Loc. cit.*, pp. 10, 12.

[112] KLEMM, *Steine und Steinbrüche*, pp. 261–267; R. KLEMM/D. KLEMM, *Die Steine der Pharaonen*, München 1981, pp. 37–38 (hereafter cited as KLEMM, *Steine der Pharaonen*).

[113] R. KLEMM, *Vom Steinbruch zum Tempel. Beobachtungen zur Baustruktur einiger Felstempel der 18. und 19. Dynastie*, in: *ZÄS* 115, 1988, p. 43.

[114] D. ARNOLD, *Building in Egypt. Pharaonic Stone Masonry*, Oxford 1991, pp. 33–36. See also: B. ALSTON/J. HARRELL/I. SHAW, in: P.T. NICHOLSON/I. SHAW (eds.), *Ancient Egyptian Materials and Technology*, Cambridge 2000, p. 7.

[115] KLEMM, *Steine und Steinbrüche*, pp. 261–262, Abb. 302a, b; KLEMM, *Steine der Pharaonen*, p. 38, Abb. 38,1; D. ARNOLD, *op. cit.*, p. 34, figs. 2, 7.

[116] The narrow width of these marks may be an argument to rule out the possibility that the workmen used stone picks or axes. D. ARNOLD believes that such tools were used in Old and Middle Kingdom quarrying (D. ARNOLD, *op. cit.*, p. 33).

[117] For the latter, FRASER suggests a Late Period date ("second Persian Rule"; *El Bersheh* II, p. 58), but the chisel marks from that period differ considerably (*cf. infra*).

[118] For those in zone 2 see WILLEMS, in: *GM* 110, p. 88, figs. 5, 7, 90.

A second type of chisel marks typical of a later phase is found in quarries in the Wâdî Nakhla itself. Here the walls and ceilings are relatively smooth and the marks, in all likelihood produced by the sharp side of the chisel, are long (ca. 40–50 cm) and straight or only slightly curved. The result is a pattern of fine continuous parallel lines[121] or a herringbone pattern, which up till now has been interpreted as typical of the early New Kingdom (18th Dyn.)[122]. Dated inscriptions and cartouches in quarries 1–11, 34 and 35, however, show that at Deir al-Barsha the herringbone pattern is undoubtedly connected with the intensive quarrying that took place in the Late Period under Nectanebo I (30th Dynasty)[123]. The difference in length between the early New Kingdom instances, which are usually a hand span long (15–20 cm), and the present ones suggests a development in technology. It is likely that the quarrymen in the Nectanebo quarries used tools made of iron, a material not yet available in the early New Kingdom.

These observations show that insight into the chronological sequence of chisel marks and chisel techniques can be refined by recording them in their context, comparing them to other sites and to chronological evidence in the context where they occur. D. Depraetere has begun making a catalogue of variations in chisel marks at the site. The observations thus compiled will later be integrated into a geographical distribution map indicating the spread of the different types of tools and techniques used at the site.

D.D./M.D./D.K./R.K.

Quarry Marks, Drawings and Inscriptions

The reports of G. Willoughby Fraser and E. Clédat mention some drawings in black, red and green occurring in quarries 6 and 9 or 10[124] and a few inscriptions, mainly cartouches and some dedications. There is, however, much more material of a very diverse nature: all over the Wâdî Nakhla quarry marks, drawings and inscriptions can be found, both on the walls and on the ceilings of the various quarries. The overwhelming majority have been applied in a well-preserved red ochre paint.

On the walls and pillars of the quarries drawings are more numerous than inscriptions. Amongst the depictions discovered this season there are boats, temple façades, men on horseback, a sphinx with double crown and another with a *nemes*, a person wielding a shield and wearing a kind of feathered hat, a duck carrying four small ducklings on its back, five enigmatic figures with feathers on their heads, and columns of short vertical lines probably representing lists of counted units. Texts are less common, but they often contain interesting information. There are cartouches of Nectanebo I in Demotic and occasionally in Hieroglyphic, as well as several dedications to the god Thoth of Hermopolis in large Demotic signs. The latter are especially revealing because they are dated between the years 6 and 13 of Nectanebo I.

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[119] J. Harrell, *Ancient Quarries near Amarna*, in: *Egyptian Archaeology* 19, 2001, p. 36.

[120] A. Klug, *Königliche Stelen in der Zeit von Ahmose bis Amenhotep III.*, *Monumenta Aegyptiaca* VIII, Turnhout 2002, p. 367.

[121] The length and regularity of these marks exclude the possibility that the tool was a pick or axe.

[122] Klemm, *Steine und Steinbrüche*, pp. 261–263, Abb. 303a, b, p. 267, Abb. 311; Klemm, *Steine der Pharaonen*, pp. 37, 38, Abb. 38.2; J. Harrell, in: *Egyptian Archaeology* 19, 2001, p. 36.

[123] This also contradicts Fraser who dates quarry 8 to the Ptolemaic Period, without giving any argumentation. Sayce also suggests a later date for the quarries inside the wadi (A.H. Sayce, in: *PSBA* 9, 1886–87, p. 196).

[124] *El Bersheh* II, p. 56; Sayce mentions the same depictions (A.H. Sayce, *op. cit.*, p. 196).

As G.W. Fraser, H. Willems and R. and D. Klemm have already pointed out[125], the ceiling of the quarries is divided into zones by lines in red ochre. Most of these aim at being straight and, a few exceptions notwithstanding, succeed in being so. They generally converge with other lines at angles of about 90 degrees, and at the intersections often a shallow round hole (Ø c. 0.5 cm) can be found, probably produced by a pointed chisel[126]. The majority of the resulting irregular polygonals seem thus to be composed of squares and rectangles. Some of these zones are quite large (e.g. 25 m²), but others are very small (less than 1 m²). It is our impression that these lines at one stage covered the entire ceiling of all quarries, although depending on the quarry or their place inside a quarry, they have disappeared with the crumbling of the ceiling caused by moisture or were abraded by sand carried by the westerly wind in the wadi.

In some polygons there are quarry marks in the form of hour glasses or *nfr*-signs, but more common are Demotic inscriptions, again in red ochre (see Taf. 40b). Although some can be found in the centre of the zones, most are written close to and parallel with the demarcating lines between two zones, so that they seem to rest on them. There is no general rule for the orientation of the inscriptions: for some the reader has to face north towards the entrance of the quarry or south towards its deepest point, while others are only legible looking east or west, either facing the centre of the polygonal zone or having the back turned to it.

In most cases the inscriptions in each polygonal zone only provide name and patronymic of a single individual, although the identification can be reduplicated up to ten times or more. It is striking to find the same names with often identical patronymics returning throughout the various quarries, suggesting prosopographical identification. Even more remarkable is the link with identical names found in the limestone quarries of Tûra and al-Maasâra[127], suggesting a close connection between both quarry sites.

Palaeographically the inscriptions are an interesting combination of early and middle Demotic, which confirms the Nectanebo I date suggested by the cartouches on the walls (see Taf. 40a). Some texts on the ceiling also mention a date, mostly between regnal year 9 and regnal year 13 of an unnamed pharaoh. A few exceptional examples identify Nectanebo I, thus leaving no chronological doubt.

Similar combinations of inscriptions and lines on the ceiling, mostly but not always in red ochre, are known from other limestone quarries in Egypt. Those in the quarries of Deir Abû Hinnis with dates written in Hieratic, are datable to the New Kingdom[128]. The lines in a quarry near Sheikh Sa'îd well are dated tentatively to the New Kingdom by B. Kemp[129]. None of these ensembles have been properly published, however, the editors of the texts generally neglecting their location or the relation with the

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[125] *El Bersheh* II, p. 56; Willems, in: *GM* 110, p. 76; Klemm, *Steine und Steinbrüche*, p. 120.

[126] Such *piquetage* has also been observed on the ceilings in the quarries of Deir Abû Hinnis although here several stand close together. Gasse interprets them as indications of where a block had to be extracted (A. Gasse, *op. cit.*, p. 101).

[127] D. Devauchelle, in: *ASAE* 69, 1983, pp. 169–182 elaborating upon remarks by W. Spiegelberg, in: *ASAE* 6, 1905, pp. 219–233.

[128] A. Gasse, *op. cit.*, pp. 96–97.

[129] B. Kemp, in: *JEA* 87, 2001, p. 17. It is however not clear whether the lines in Sheikh Sa'îd resemble those in quarry 2 (Late Period) or those in quarry 15B (New Kingdom).

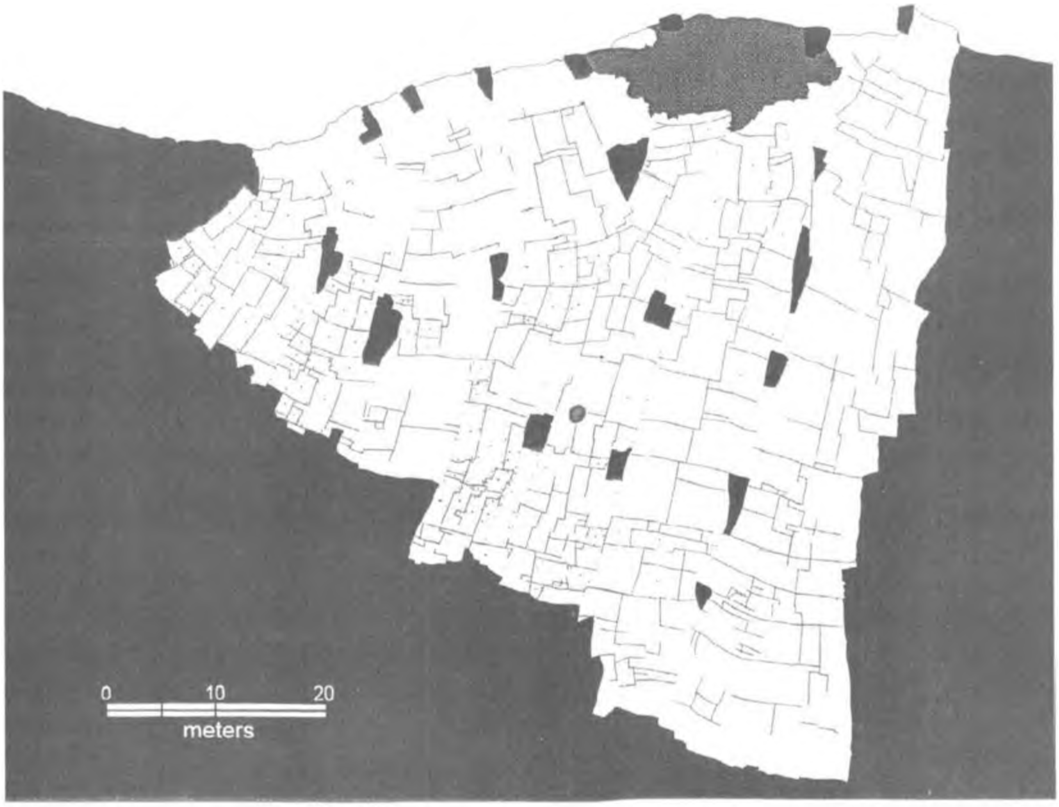

Fig. 16: Map of the ceiling of quarry 2, indicating the pattern of painted lines

demarcating lines. Nor has their meaning and purpose yet been explained[130], for which reason their study is an important focal point of our research. On the individual quarry maps they will be recorded together with the drawings and texts observed on the walls.

c. Focal Investigations

Exploration of Quarry 8

On FRASER and BLACKDEN's map quarry 8 was indicated as an "extensive quarry not surveyed". Only its front part was drawn, the actual extent of the quarry remaining unknown. Reconnaissance visits by D. DEPRAETERE gave an idea of its dimensions and resulted in a preliminary contour map completing the plan of the wadi (Fig. 1). This quarry may be the largest subterranean limestone quarry in Egypt, measuring c. 270 m (east-west) by 250 m (north-south), the ceiling reaching a height of 6 to 8 m in places where the floor is relatively free from quarry debris.

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[130] KEMP suggests that they must relate to the management of the quarrying (B. KEMP, *op. cit.*, p. 17) while GASSE concludes, on the basis of the dates, that the lines have something to do with the proceeding of the quarry activity (A. GASSE, *op. cit.*, p. 97). To date however, no attempt was made to relate the lines to the process of exploitation.

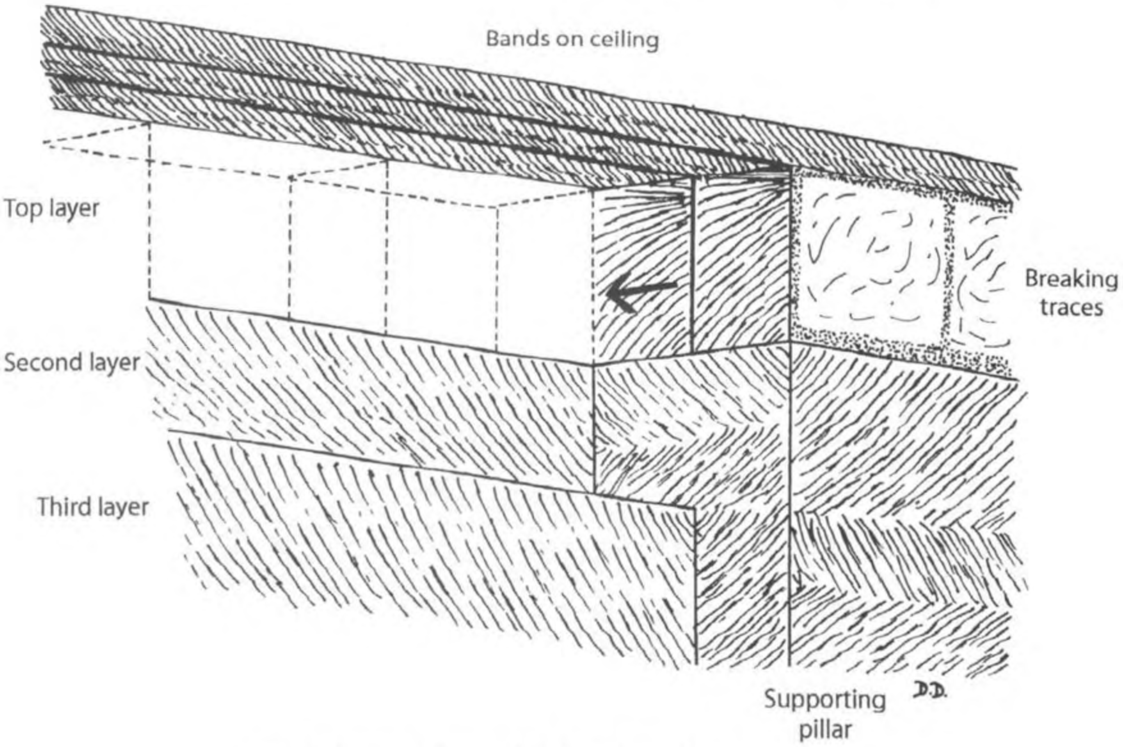

Fig. 17: Illustration showing how the top layer of limestone was cut

Quarry 2 and its Exploitation

Quarry 2 (see Taf. 33c and Fig. 16) is the most extensive one on the southern side of the wadi, measuring max. 70 m along its front with its deepest point located at 70 m from the façade. Its entrance is characterised by an alternation of pillars and openings typical of gallery-quarries. The exploited stratum of white limestone has a mean thickness of c. 6 m and from west to east follows the downward trend of the limestone stratum commented upon on p. 272. In what follows we will give a tentative reconstruction of the method of quarrying based on our observations (see Fig. 15).

In front of the quarry, negative traces left by quarrying are visible on the rock floor. In combination with the chisel marks appearing on the northern face of the pillars of the façade, these traces show that the front part was initially cut away as an open-air quarry. After a superficial removal of weathered limestone, blocks were extracted from the mother rock by cutting channels along the four vertical sides[131] and detaching these from the lower side, probably by levering[132]. The debris produced during the work was evacuated downslope into the wadi, which resulted in a scree of loose stone flakes.

Once the future ceiling of the quarry was reached, the spacing of the supporting pillars for the front was decided upon. In quarry 2, seven pillars were left, located at regular intervals. Between these pillars the quarrymen in a first stage cut a channel to separate the ceiling from what would become the upper side of the top layer of blocks. They thereby followed the natural stratum in an economical way, minimizing the loss of high quality rock while at the same time taking into account the strength of the ceiling. The surface of the ceiling is fairly flat and shows a very regular pattern of chisel marks, suggesting that the quarrymen worked uninterruptedly along successive lines parallel to the front (see Taf. 39). On the pillars we find the negative traces left by the channels that in a second stage cut the vertical sides of the blocks. These traces suggest that the top layer blocks were cut as though they were lying on their long sides (see Fig. 17). The majority of the chisel marks on the ceiling form long, successive, parallel bands running from east to west, proceeding from the façade inwards to the rear of the quarry. A small stone ridge indicating where the chiselling of a new section was started accentuates the bands (see Taf. 39). These traces on ceiling and pillars suggest that most blocks quarried from the top layer had a uniform depth and width. Due to the regularity of the chisel marks on the ceiling and the fact that they continue uninterruptedly in parallel lines over long distances from east to west, it is impossible to deduce the length of the blocks. The lines suggest that the workmen carved the upper side of the top layer in two successive stages. Initially half to three quarters of the depth was cut. Most probably the resulting channel had to be widened before the workman was able to introduce his hand to cut the last portion. As a result, each section consists of a broad band which itself contains two narrower successive bands of parallel chisel marks (see Fig. 17). Finally the layer was divided into individual blocks by vertical channels and a third horizontal channel at the bottom. The walls of the quarry clearly show that the blocks of the top layer were detached by breaking. The negative trace this procedure left on the mother rock is an irregular surface without cut marks framed by the chisel marks of the channelling (see Taf. 40a). The care with which the top of the first layer was chiselled is remarkable. We have as yet no satisfactory explanation of why this was deemed necessary. Since carving out the future ceiling of the gallery in the most economical way must have been an important assignment, it may have been the work of specialists.

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[131] See D. Arnold, *op. cit.*, p. 32, fig. 2,5 (upper drawing) for an illustration of this.

[132] This method is different from the one applied for the extraction of the top layer in the subterranean part of the quarry (*cf. infra*). In what follows we will use the term 'layer' to designate a horizontal segment of blocks, and 'section' for a vertical segment.

After the upper layer of blocks had been removed, the procedure was less complicated. One could sit or squat on top of the second layer and cut channels along three vertical sides of the future block (Fig. 15). As a result, from this layer down, the walls show no traces of detachment by breaking, but only chisel marks[133]. This is also demonstrated by partly detached blocks still *in situ* in the rear part of the quarry. The blocks were broken away from the mother rock from below, probably by levering. It is certain that the blocks from the second layer down were not separated from lower levels of mother rock by chiselling, as no chisel marks are observed on horizontal *in situ* rock surfaces. The semi-detached blocks also demonstrate that at least from the second layer down, blocks of varying sizes were extracted, lying in different directions (east-west as well as north-south). First, long vertical channels were cut and then the rock was subdivided into smaller blocks. This division continued downwards until at least halfway through the stratum, always leaving a comfortable (stepped) working space, before continuing the work on the top layer deeper into the rock. The shape of the remaining walls as well as the partly detached blocks *in situ* suggest that work in the lower layers of blocks was less systematic than in the uppermost layer.

One could only extend work on the top layer more deeply into the rock after the second layer in the preceding section had been removed (see Fig. 15). Were this not the case, the stonecutter could at best cut the channel on the ceiling side and perhaps prepare the two vertical channels. The subsequent extraction process, however, required more space for manoeuvring and thus the second layer of the preceding section had to be removed first. The extraction of a new section of the top layer leaves a small ridge on the ceiling between this and the former section. As a result the ceiling displays broad bands of parallel chisel marks. Each band is bordered by two ridges and represents a section of the top layer that has been separated from the ceiling (Fig. 17).

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[133] This difference in detachment gives a very typical appearance to the walls and pillars, leaving a distinct band on them just below the ceiling (see Fig. 17).

After some progress had been made in removing the second section of the first layer, other workmen could start to extract the third and lower layers of the first section. This would give the front of the quarry a stepped appearance[134]. It is not certain how the two activities were organized. For reasons of efficiency, they may well have been carried out simultaneously. In this case, two alternative methods may have facilitated an uninterrupted progress of the work.

1. A group of workmen proceeded chiselling the ceiling uninterruptedly from east to west, while another group of workmen took away the lower layers of the preceding sections. By this method different groups of workmen could be deployed simultaneously in different parts of the quarry.
2. The workmen worked in smaller areas, penetrating more deeply directly after the second layer had been extracted. In this case, one may assume that both the top and lower layers were cut by the same people, since in this hypothesis they would be able to work uninterruptedly in the same area.

The chisel marks on the ceiling, which continue uninterruptedly over long distances, definitely plead in favour of the former hypothesis.

Inside the quarry the ceiling is covered with lines in ochre and over four hundred Demotic inscriptions, mostly names (see Taf. 40b), closely connected with them. In each polygonal zone a single man is identified once or in several places. In some locations in the southern part of the quarry, symbols were used instead of names, e.g. hour-glass signs. These lines, although generally weathered away at the entrance, seem to have covered the ceiling of quarry 2 from the front to the rear wall. In combination with the homogeneity of the chisel marks this suggests that all the work in the quarry was conducted in the same period.

Various observations help us to reconstruct at what stage these lines were drawn. A first is that, whereas the bands of chisel marks are very regular over most of the surface of the ceiling, the disposition of the lines, which in many cases do not follow the ridges left, is very irregular (Taf. 39). Moreover, some of the lines run over a considerable length without discontinuity, as if they were painted in one movement. This suggests that at least the top layer must have been extracted to some depth at the time of painting. This makes it unlikely that the lines are immediately connected with it. As was seen above, the top layer could only be extracted once the second one had already been removed in the preceding section. Therefore the lines must have been painted after the top two layers were extracted, but before the activities had proceeded much further, because otherwise it would be difficult to write and draw lines on the ceiling. The faint traces of red lines in quarry 1, of which the exploitation was stopped when only a small amount of stone had been removed, confirm that these were painted at a relatively early stage of the extraction process.

The purpose of the lines is enigmatic. Their position on the ceiling and the stage at which they were drawn suggest that they were meant to remain visible at later stages of the exploitation. The names inside the polygones may be those of team supervisors or of the persons for whom the stone was processed. They may have enabled later identification of the group or individual that had been responsible for the extraction of a certain volume. However, the administration is more likely to have been interested in the number of blocks extracted than in the combined volume of stones and waste that was removed. To simply count the number of blocks and calculate their volume would have been a

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[134] This is still visible in the unfinished quarry 1.

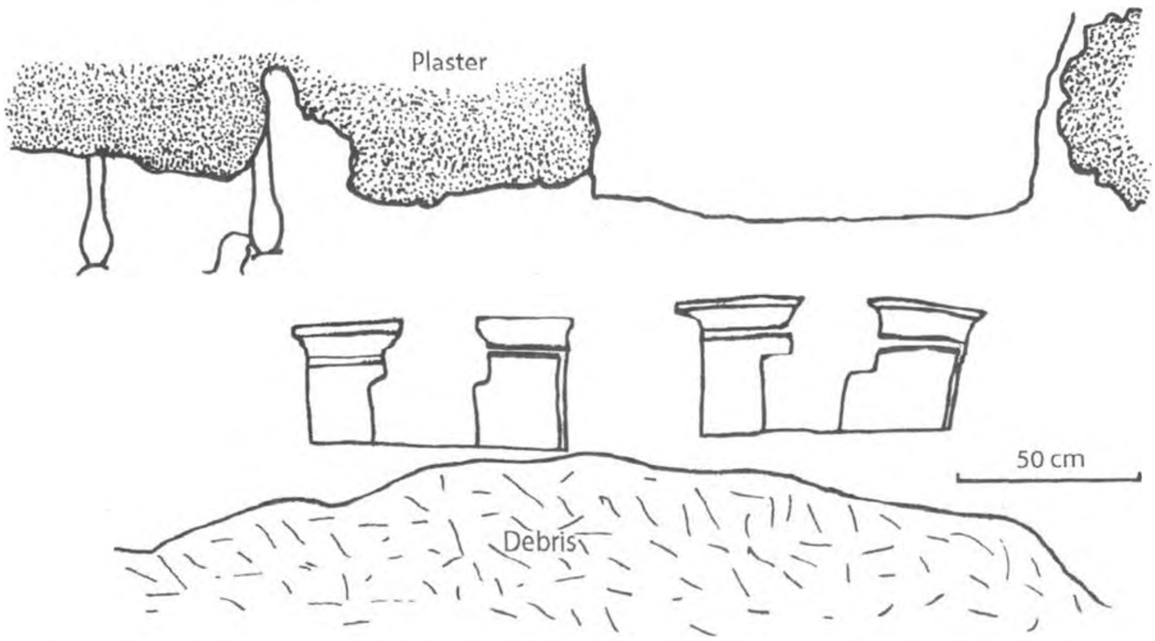

Fig. 18: Clumsily painted drawings of temple pylons on a wall in quarry 3. To the left are the lower parts of two painted columns. Their upper part disappears below a hard plaster layer dating to the Coptic occupation of the quarry

simple way of measuring the output of a group. Although it seems probable that they served an administrative purpose, the true meaning of the demarcations as yet escapes us. Hopefully, further study will shed more light on this problem.

As work proceeded, increasing amounts of debris would emerge on the quarry floor. It can still be seen that waste was disposed of directly in front of the quarry and in the disused parts of the quarry itself. Much of the surplus in this quarry was pushed aside between the pillars. Naturally, the least debris lies in the deepest part where the last blocks had been extracted. It is likely that the produce was transported away over ramps of debris from the back towards the front.

V.4 The Destination of the Quarried Limestone

The quarries inside the wadi produced an enormous quantity of stone. This raises questions as to the destination of the blocks. Dedication texts for the god 'Thoth Lord of Hermopolis' found in several quarries suggest that the stone exploited here was used for the construction of buildings in Hermopolis, where Thoth was venerated[135]. On a large stela found there by the Hildesheim expedition, Nectanebo I mentions that he founded a "House for his Father Thoth (…) built of beautiful white stone" in year 8 of his reign (370 B.C.). Width and length of the temple are stated to be 55 and c. 110 m respectively[136]. The text gives the impression that the work reached completion: the king "began the work and worked on it day and night until it was finished and his father Thoth descended into it" (lines 29–31)[137]. This contradicts ROEDER's suggestion that possibly only the foundations and the floor were finished by Nectanebo I.

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[135] The likelihood that the temple of Thoth was built with stone from the Wâdî Nakhla has already been pointed out by ROEDER, *Hermopolis*, p. 90, § 24.

[136] G. ROEDER, in: *ASAE* 52, 1954, pp. 411, 429; ROEDER, *Hermopolis*, p. 55, § 61.

Since the oldest dedication from the Wâdî Nakhla quarries dates to year 6 of Nectanebo I, it seems plausible that the high quality limestone quarried there was the 'beautiful white stone' used for the temple of Thoth in Hermopolis built by that same ruler. The drawings of temple pylons and columns discovered on the walls of quarry 3 and 4 (see Fig. 18), may thus very well concern this huge Late Period building, of which, unfortunately, only a few remnants of the portico survive *in situ*[138]. The remaining decoration of this building shows that its decoration continued under the reign of Nectanebo II and Philippus III Arrhidaeus[139]. The British Museum excavations in Hermopolis have yielded more limestone fragments of very fine workmanship bearing the name of Nectanebo II, which may originate from the same temple[140]. Alternatively, however, they derive from the temple of the goddess Wosret Nehmet-awaj in Hermopolis, also described in the stela of Nectanebo I as having been made "in beautiful white stone". With total dimensions of 15 by 30 m[141], it consisted of a façade, a courtyard with columns along its sides, a roofed pillared hall and a sanctuary. It is not unlikely that the Wâdî Nakhla was again the source of the building stone for this temple. Since other dedications in the quarries date between year 8 and 13, however, it must also have been used for other constructions or for extensions.

The stela of Amenophis III (18th Dyn.) at the entrance of the extensive quarry 15A, mentioning its opening in the first year of his reign[142], also refers to building activity in Hermopolis, more specifically an extension of the older Thoth temple[143]. Thus it seems clear that the quarry activity at Deir al-Barsha was initiated at the latest in the New Kingdom and culminated in the Late Period under Nectanebo I. Textual as well as iconographic evidence suggest that the majority of the produced blocks were exploited for building in Hermopolis and for the temple of Thoth in particular. That this was not the exclusive destination is clear from observations suggesting that the stone in quarry 15B may have served building activity at Amarna.

D.D./M.D.

Abstract

The first chapter of this article gives a survey of the scientific history of Deir al-Barsha (egyptologically better known as el-Bersheh). It also describes the zones of the concession area that will be discerned in this and future publications of the Leuven mission. The project aims, firstly, at investigating the cemeteries of the Old Kingdom, the First Intermediate Period, and the Middle King-

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[137] SPENCER also believes that the temple was completed in the 30th Dynasty (A.J. SPENCER, *Excavations at el-Ashmunein* I. *The Topography of the Site*, London 1983, p. 7, pl. Ia (2); A.J. SPENCER, *Excavations at el-Ashmunein* II. *The Temple Area*, London 1989, p. 42).

[138] S. SNAPE/D. BAILEY, *The Great Portico at Hermopolis Magna. Present State and Past Prospects, BM Occasional Paper* 63, London 1988.

[139] G. ROEDER, *Vorläufiger Bericht über die deutsche Hermopolis-Expedition 1938 und 1939*, in: *MDAIK* 9, 1940, p. 78 (the discovery); ID., *Zwei hieroglyphische Inschriften aus Hermopolis*, in: *ASAE* 52, 1954, pp. 411–412 (publication of the stela); D. ARNOLD, *Zur Rekonstruktion des Pronaos von Hermopolis*, in: *MDAIK* 50, 1994, pp. 13–22; ROEDER, *Hermopolis*, pp. 53, 62, § 74c, 299–300.

[140] A.J. SPENCER/D.M. BAILEY, *Ashmunein (1983), BM Occasional Paper* 53, London 1984, pp. 8–9, 26, 30–32.

[141] G. ROEDER, in: *ASAE* 52, 1954, pp. 397. 403–404. 406. 431–435 (reconstruction of the plan on p. 433).

[142] A.H. SAYCE, in: *PSBA* 9, 1886–87, p. 179.

[143] The New Kingdom temple was replaced by the Late Period temple of Nectanebo I.

dom, taking into consideration possible sociological differences between the various contemporary cemeteries, secondly, at the ancient exploitation of the stone quarries in the region, and, thirdly, the later occupation of the tombs and quarries by hermits. Section II explains the new coding system of the tombs, which differs considerably from the older systems, all of which were intended for use in small parts of the cemetery only. Work in the area of the nomarchs' tombs of the Middle Kingdom (zone 2) primarily concerned an archaeological dump near the forecourt of the tomb of Djehutihotep (No. 17L20/1, Newberry's No. 2), where a large amount of decorated wall fragments and fragments of tomb equipment were found. The ceramics generally accords with a date in the latter half of the 12th Dynasty. A renewed study of tomb 19M70/1 on the top of the north slope of the Wâdî Nakhla leads to remarks on the genealogy of the nomarchs. Either a 'new' nomarch should be inserted, or the tomb belonged to a member of the nomarchal family working in the residence. The latter option seems slightly more likely, but, on the basis of current evidence, neither option can be fully ruled out.

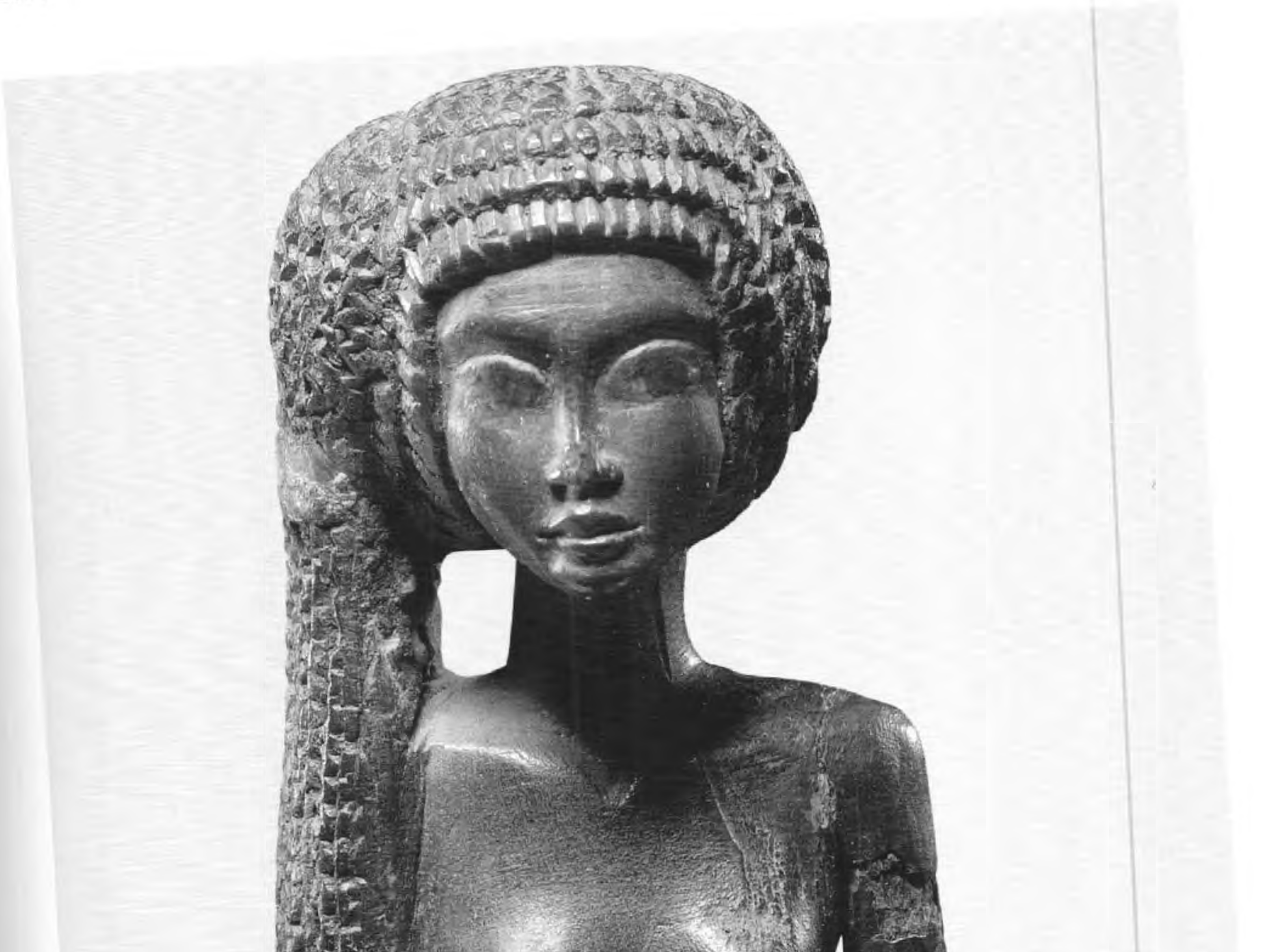
In zone 4 a small rock tomb dating to the late Old Kingdom or the early First Intermediate Period was excavated. 5th century hermits also lived in this area.

An archaeological survey was carried out in the desert plain at the foot of the hills of the Eastern Desert. This enabled the mission to draw some conclusions about the chronological spread of the ceramics over the site (IV.3). Among the most remarkable results was the find of a homogeneous collection of early Old Kingdom ceramics in the northern part of the concession area.

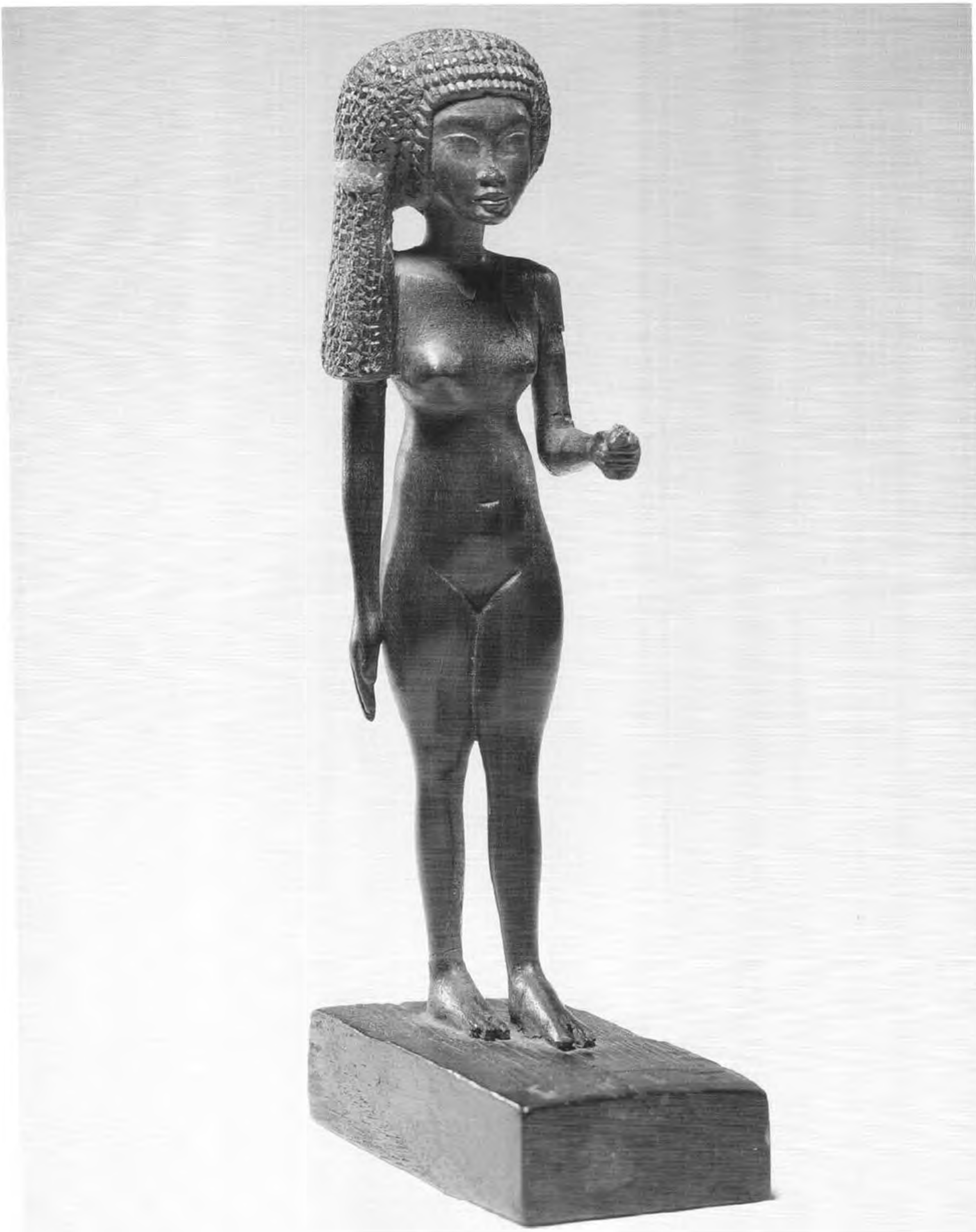
The geophysical survey in zones 8 and 9 showed that the latter zone is intersected by an east-west mud road, the purpose of which could not yet be determined. Tombs of early Middle Kingdom date are found on both sides of the road, and several of them are apparently orientated towards the road. One of these tombs was (re-)excavated.

The stone quarries in the Wâdî Nakhla were also investigated. The research consisted of a survey, geological investigations, a study of traces offering information on the quarry techniques, and preparing a record of the Demotic and pictorial graffiti in one of the quarries. Several hundred of these were recorded. Their study led to the conclusion that the quarries were mostly exploited in the time of Nectanebo I, who built a large extension to the Thoth temple at al-Ashmûnein. Some quarries were apparently worked in the time of Akhenaten, and were used to extract *talatat* blocks.

TAFELN



Nebetia, Private Collection (Photo: Jürgen Liepe)



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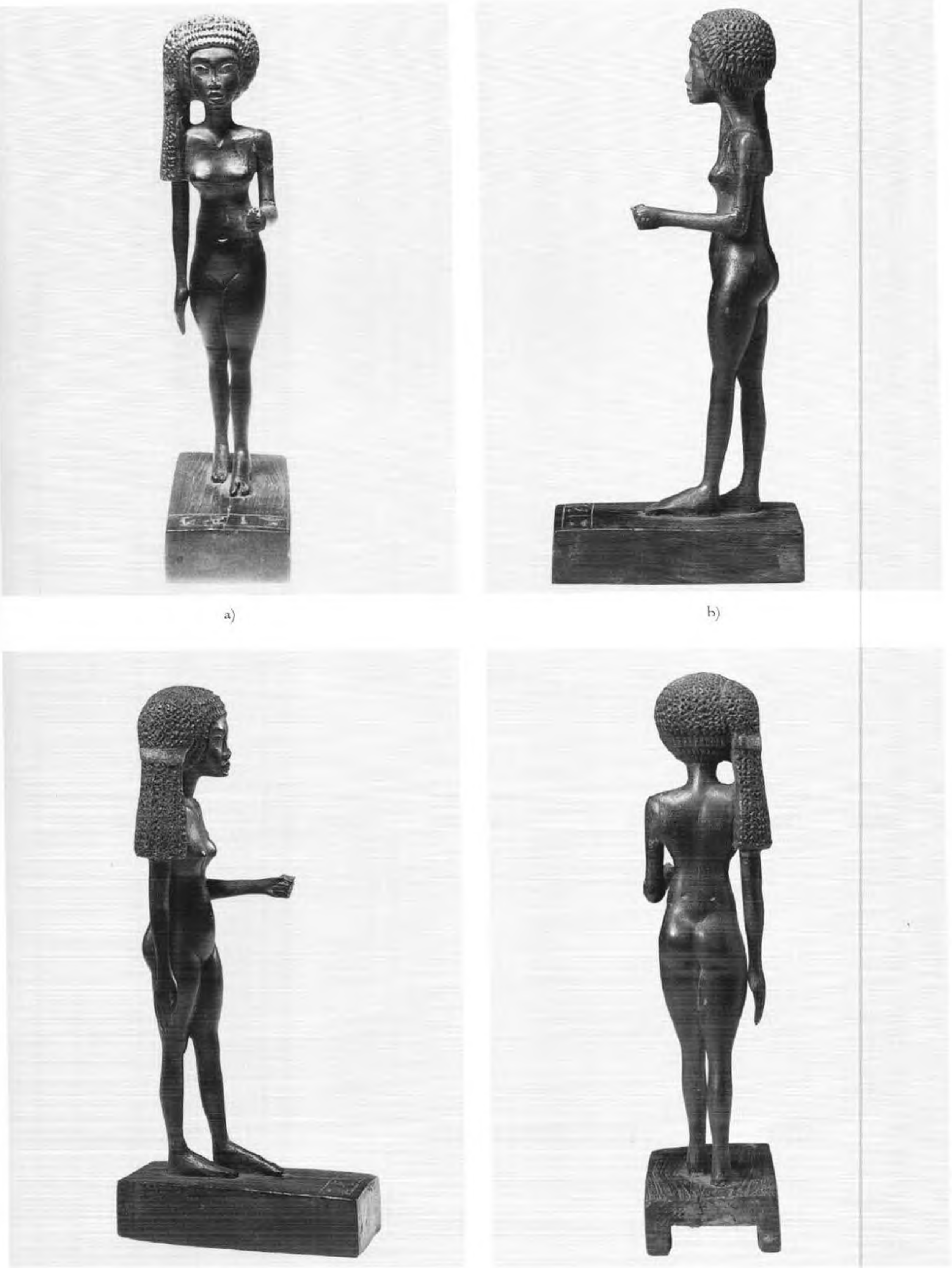

a) b) c) d)

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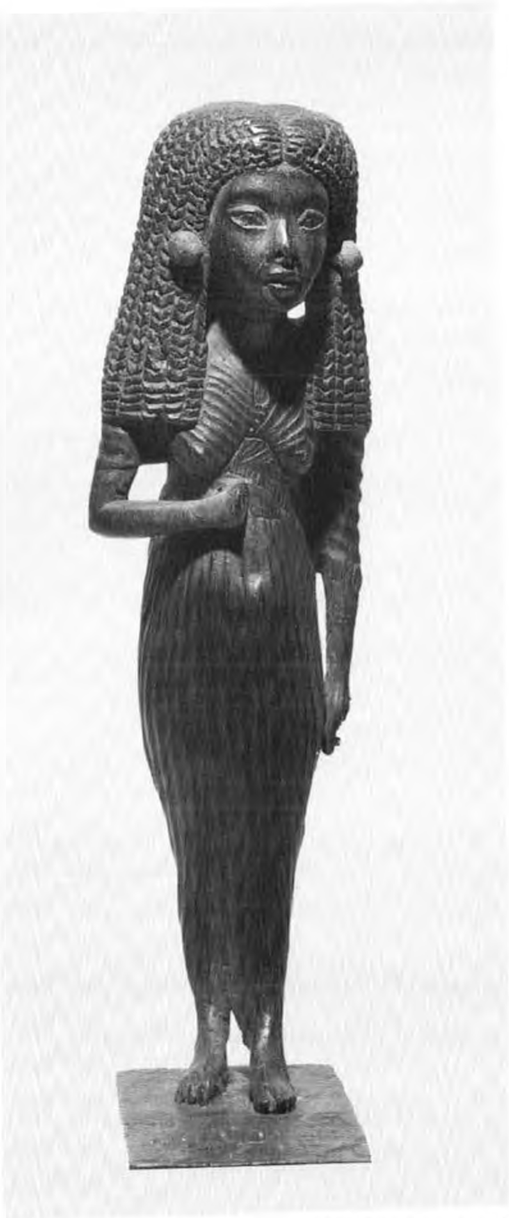
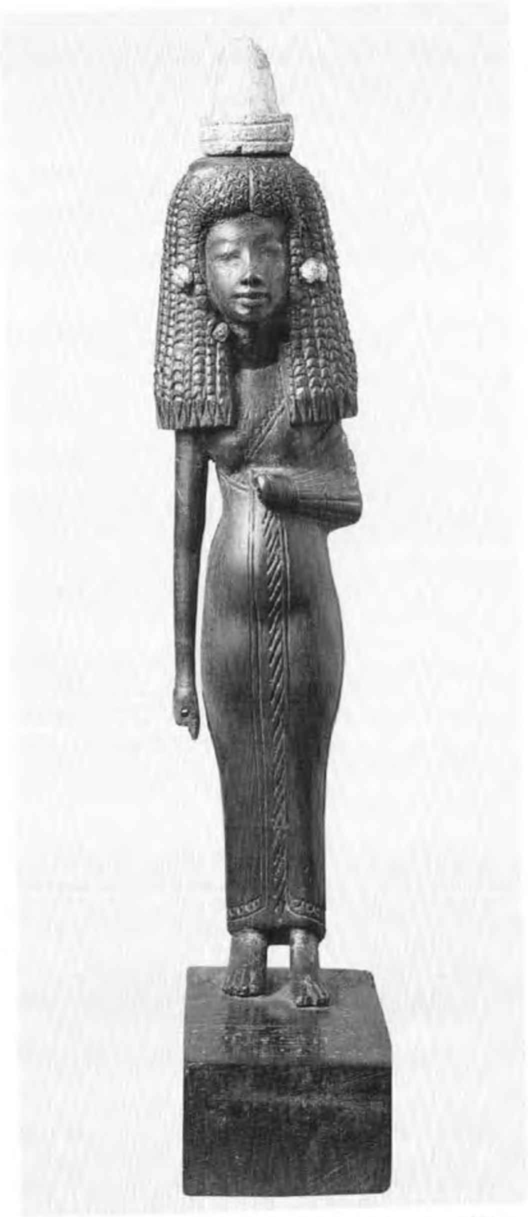
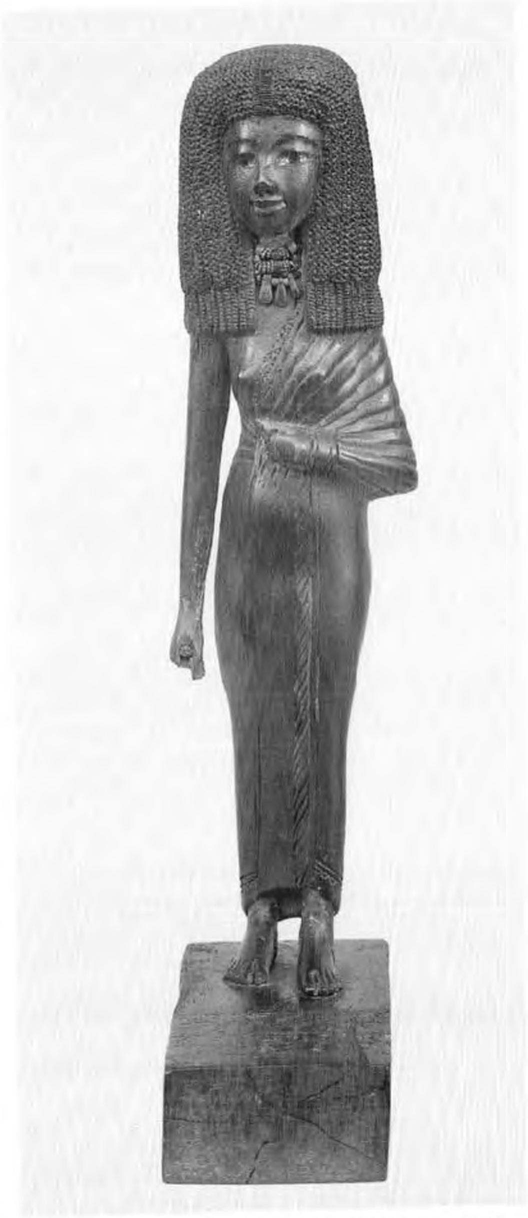


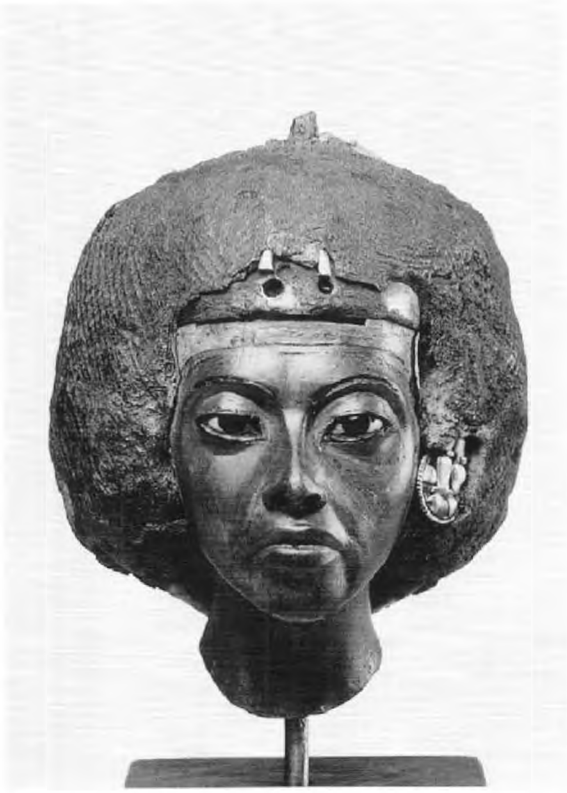
a) Singer Mi, Brooklyn Museum 47.120.3, Courtesy of The Charles Edwin Wilbour Fund



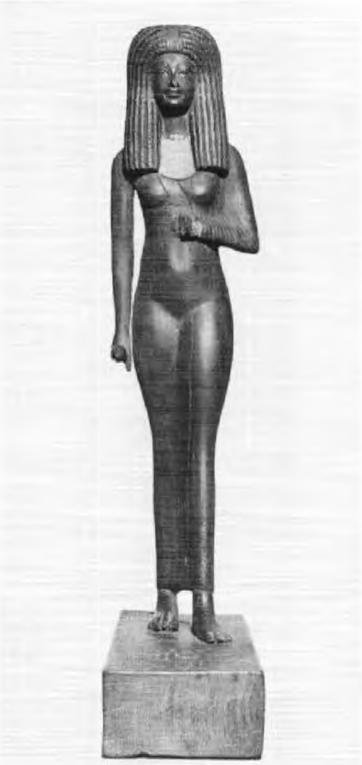
b) Tuty, Brooklyn Museum 54,187, Courtesy of The Charles Edwin Wilbour Fund



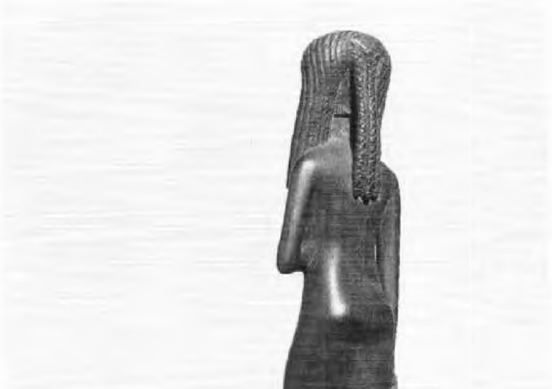
c) Chief of the Household, Tiya, New York, MMA 41.2.10, Courtesy of The Metropolitan Museum



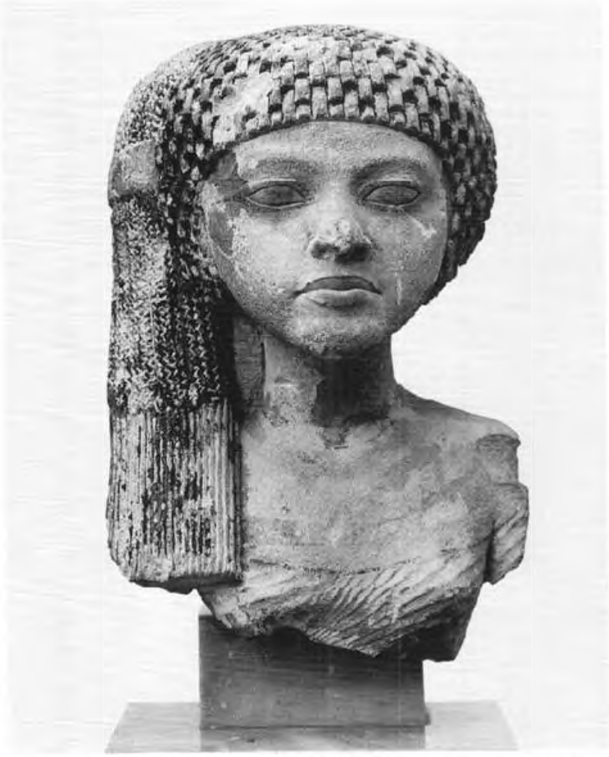
a) Queen Tiyi, Berlin 21834 (Photo: MARGARETE BÜSING)



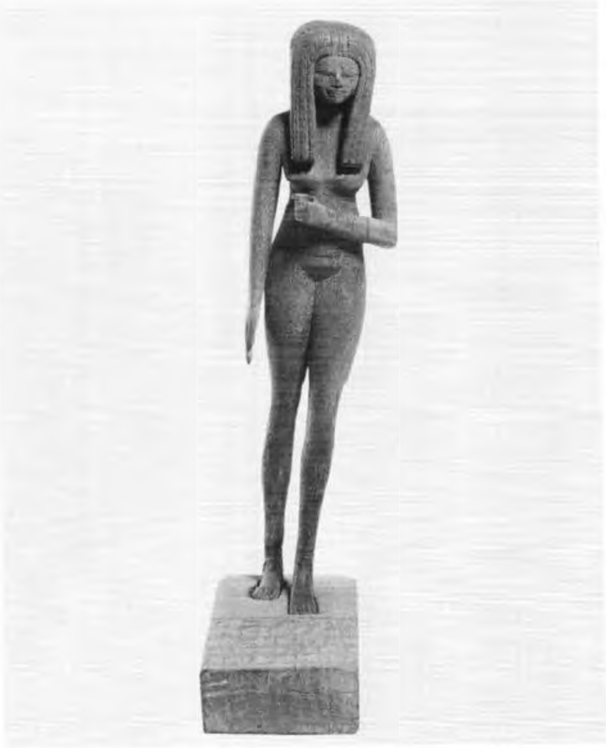
b) Lady Henut-taoui, Lisbon, Gulbenkian Museum 129 (Photo: Courtesy of the Museum)



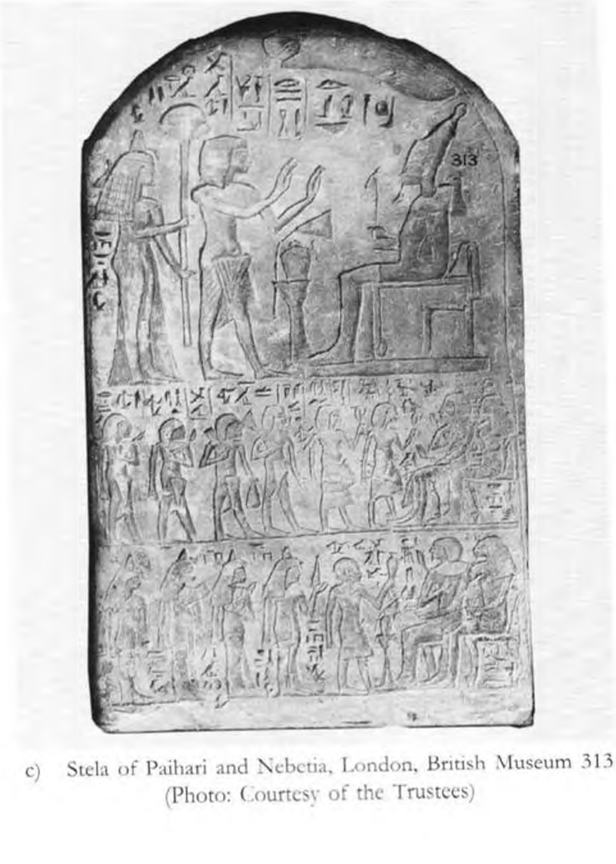
c) Lady Henut-taoui, Lisbon, Gulbenkian Museum 129 (Photo: Courtesy of the Museum)



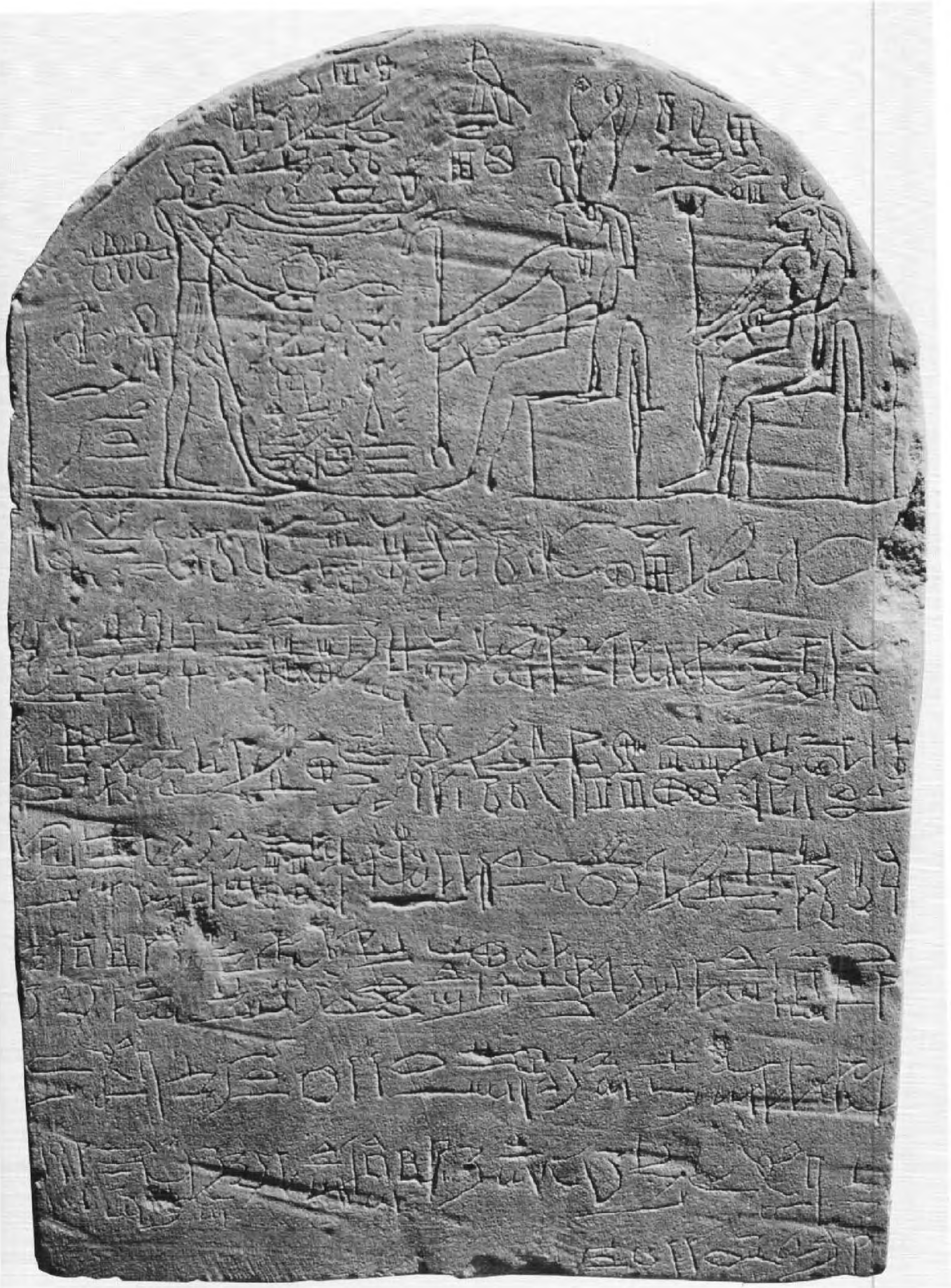
a) Princess, Paris, Louvre E 14715 (Photo: Courtesy of the Museum)



b) Tit, Leiden L.IX.6 (Photo: Courtesy of the Museum)



c) Stela of Paihari and Nebetia, London, British Museum 313 (Photo: Courtesy of the Trustees)



Saitische Votivstele aus Buto/Tell el-Fara'in

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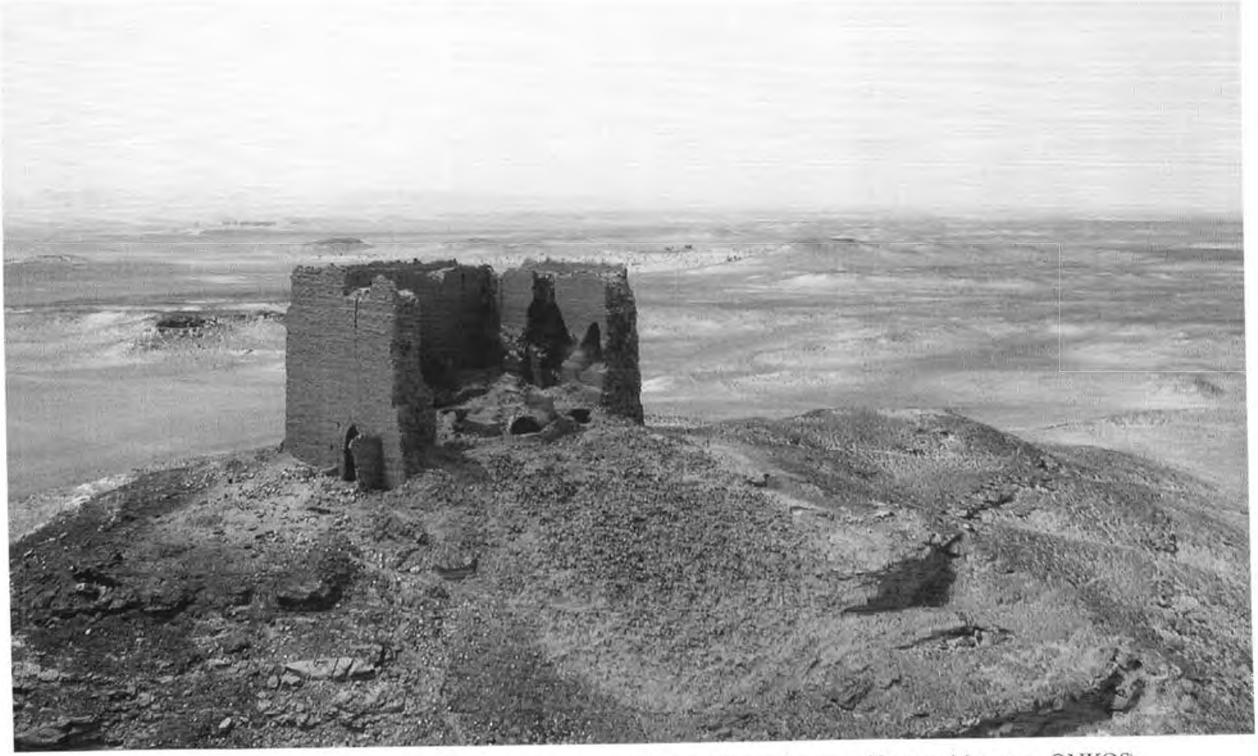
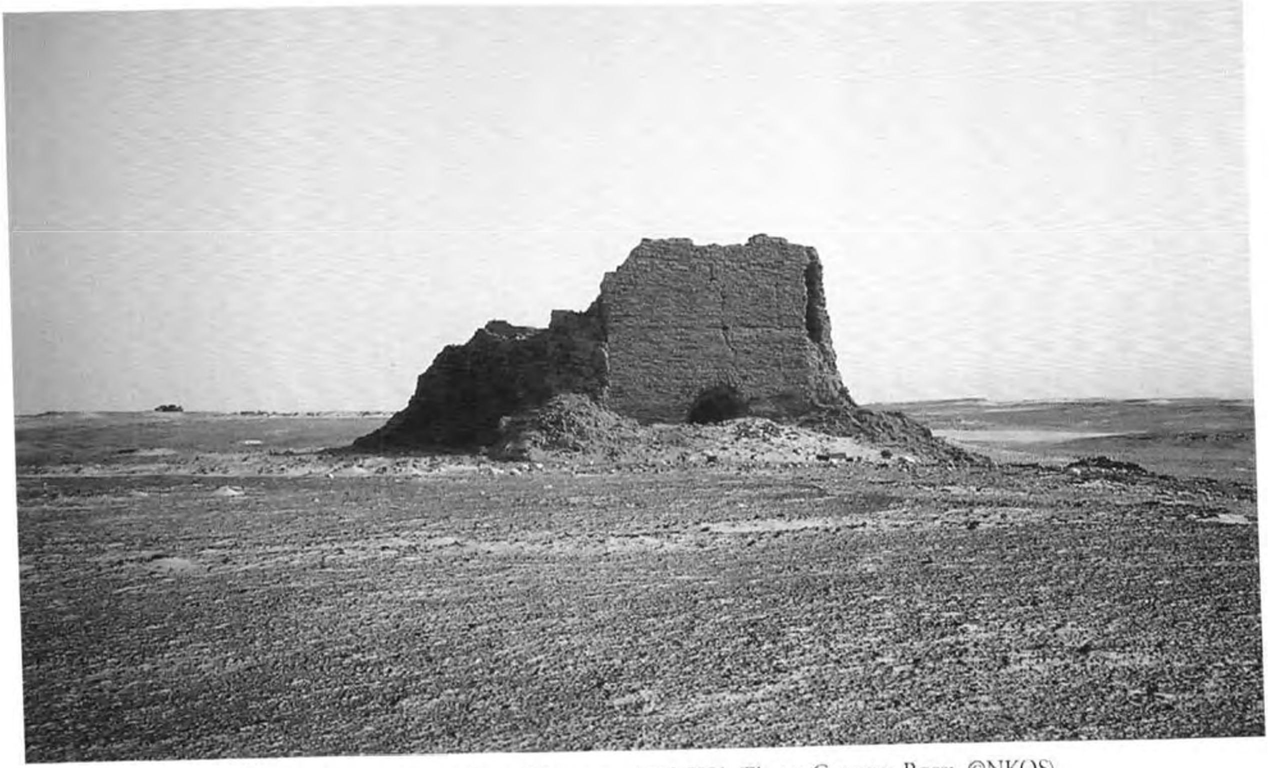
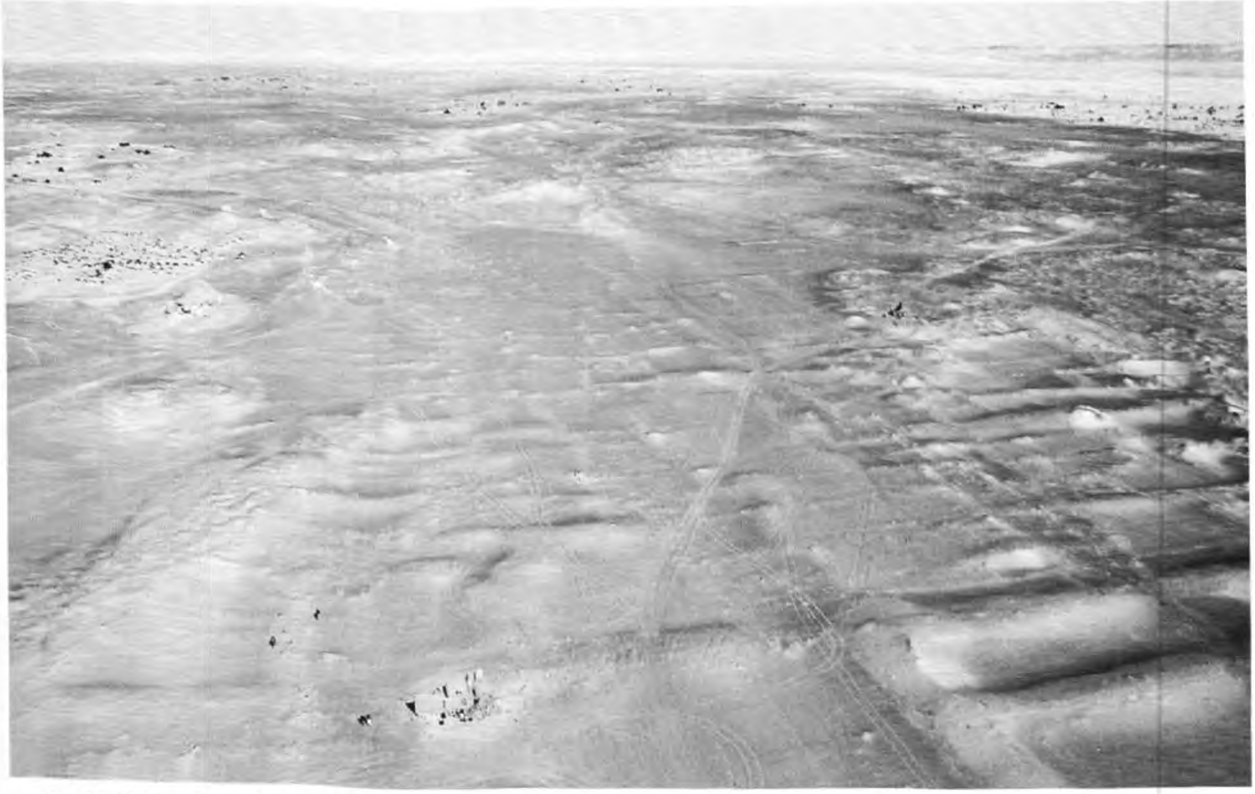


a) South-east view of Qasr el-Gib from the air, April 2001 (Photo: RICHARD KNISELY-MARPOLE, ©NKOS)

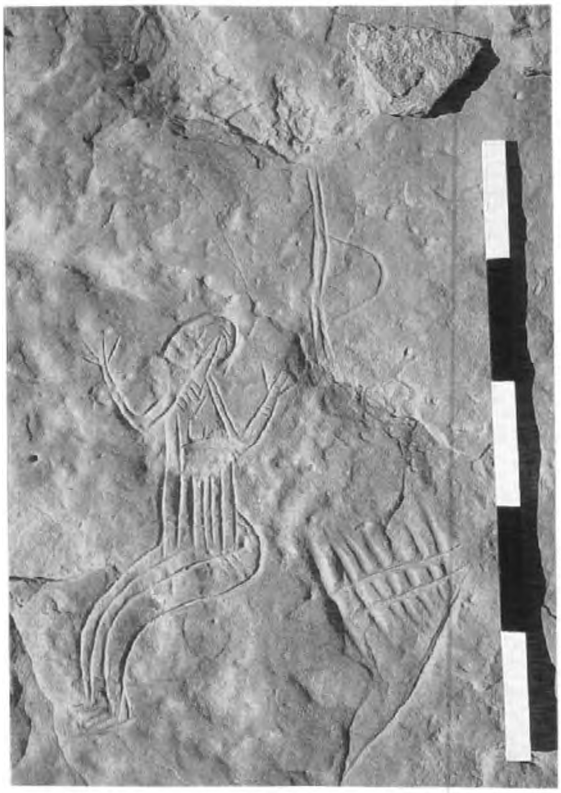


b) South-west view of Qasr el-Sumayra, April 2001 (Photo: CORINNA ROSSI, ©NKOS)

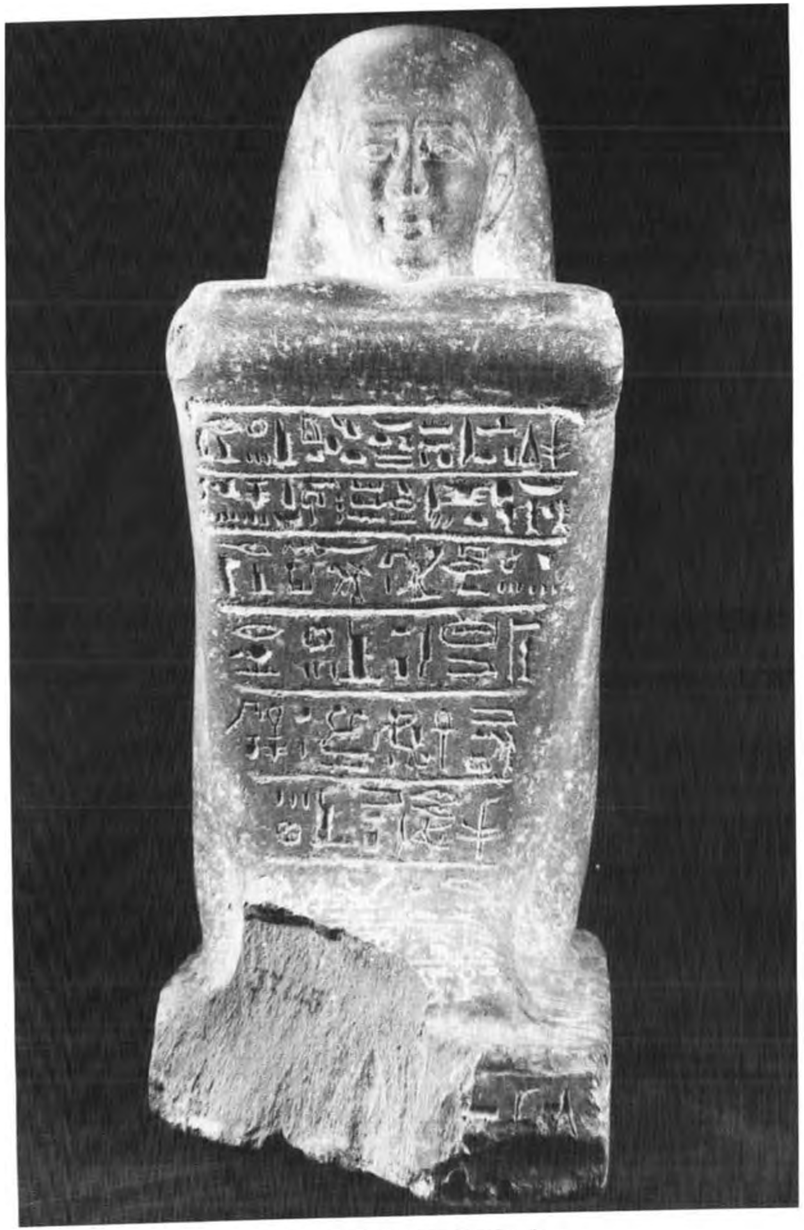


a) South view from the air of the ancient field-system of Settlement A, with a mud-brick structure visible in the foreground. January 2002 (Photo: RICHARD KNISELY-MARPOLE, ©NKOS)

b) Mud-brick enclosure of Ezbet Muhammed Tuleib seen from the south (Photo: SALIMA IKRAM, ©NKOS)



c) A petroglyph showing a man with a prominent back-side, perhaps engaged in a dance (Photo: SALIMA IKRAM, ©NKOS)



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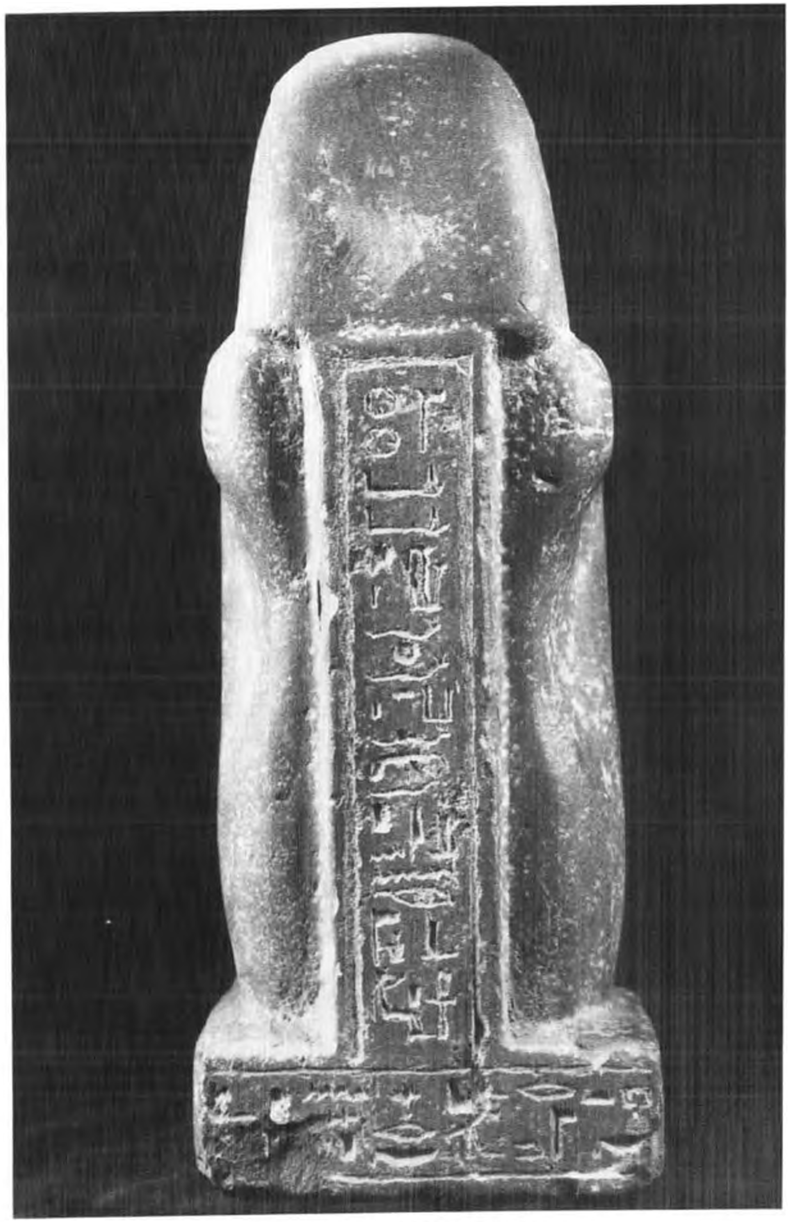

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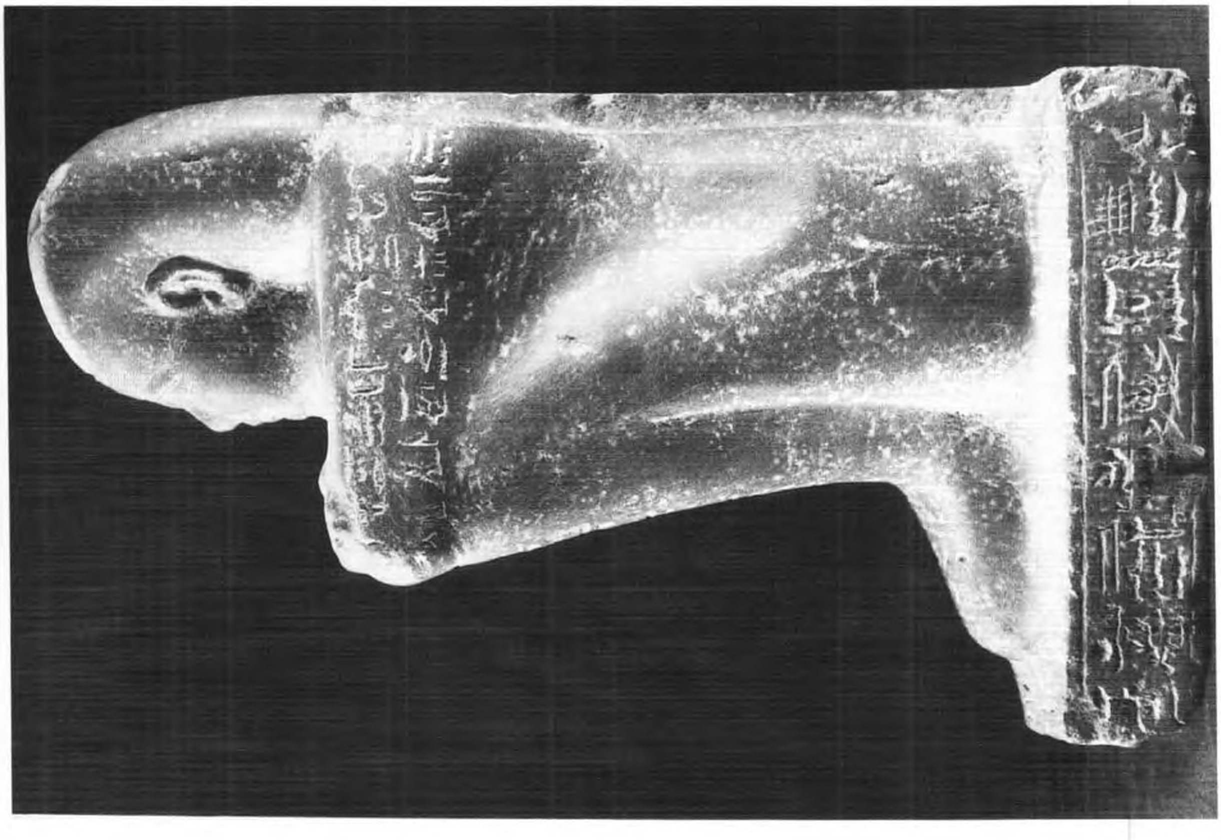

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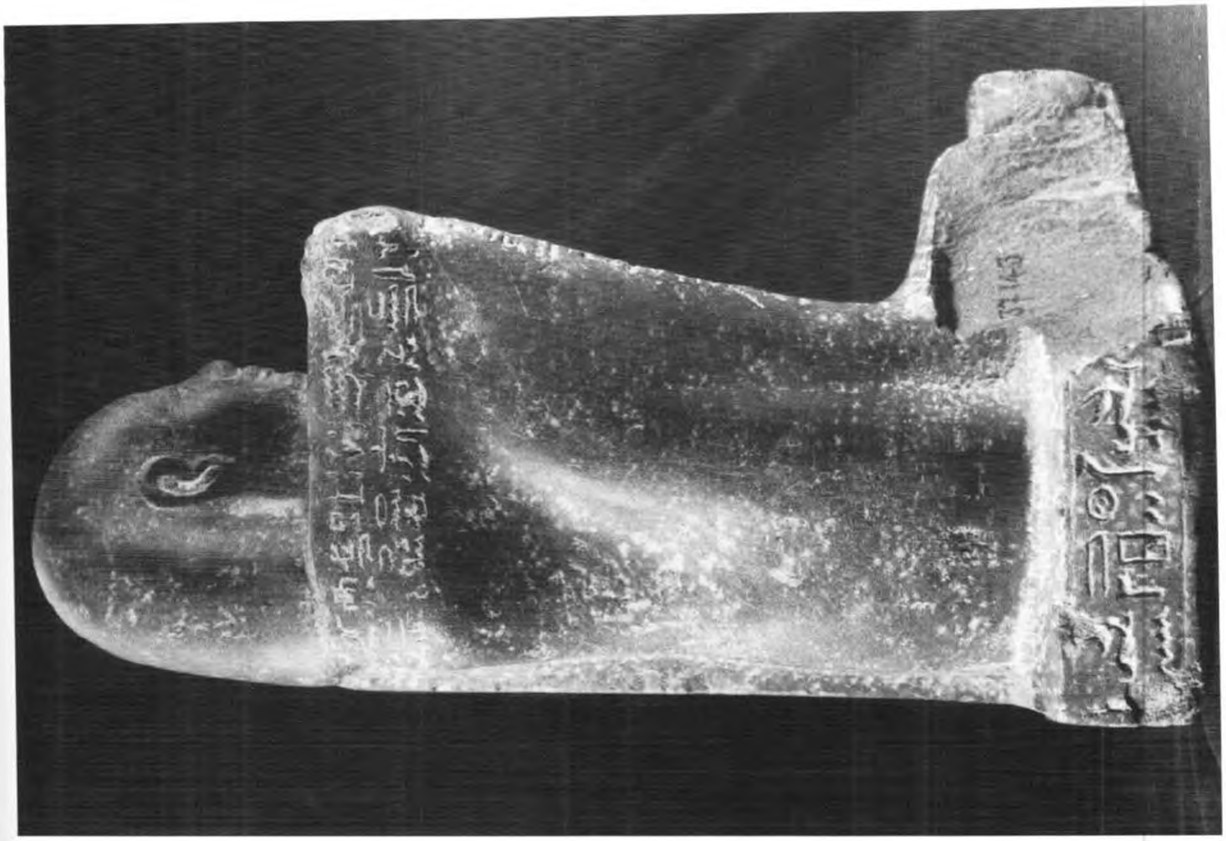

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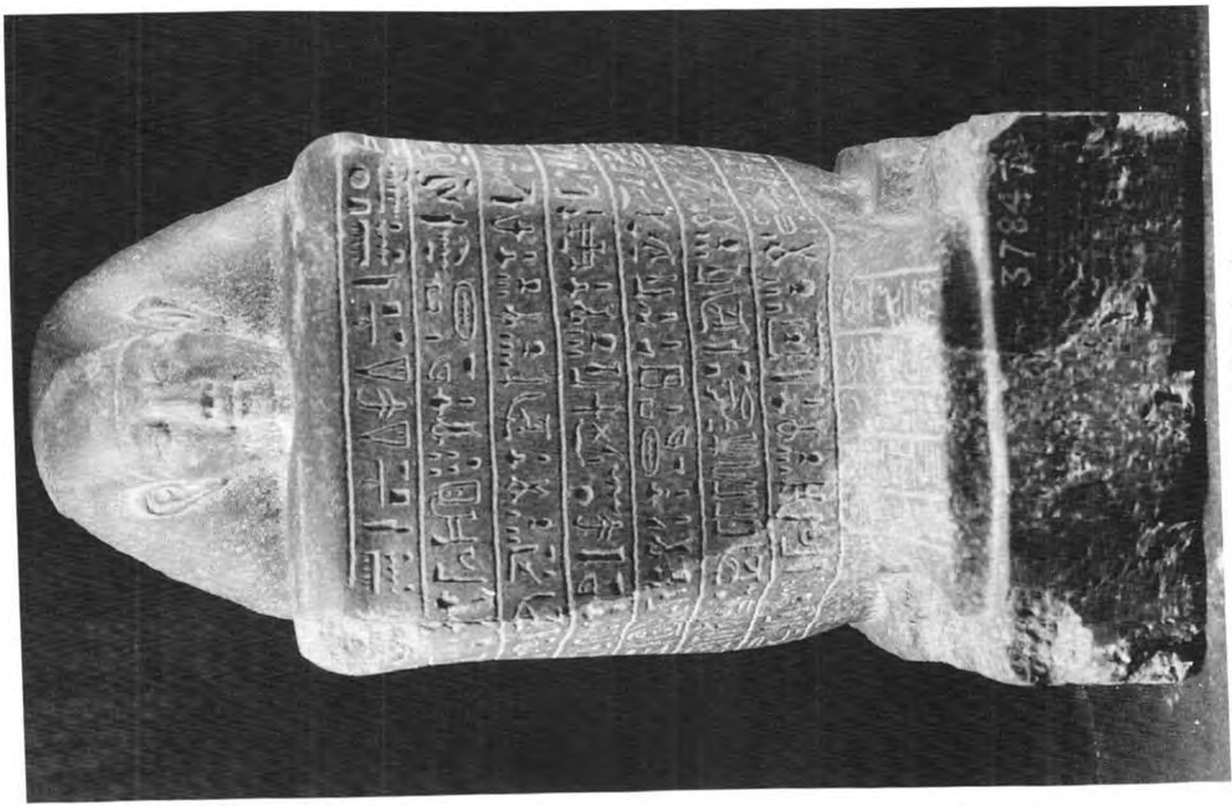
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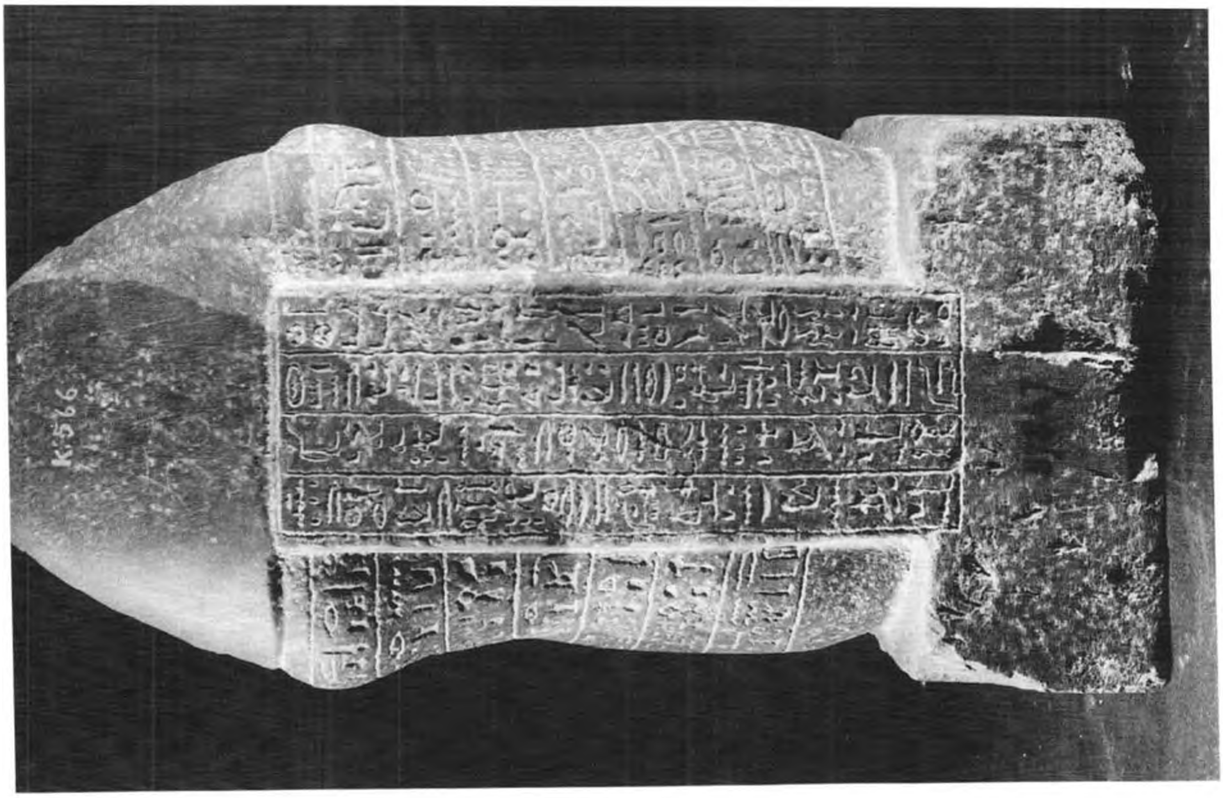
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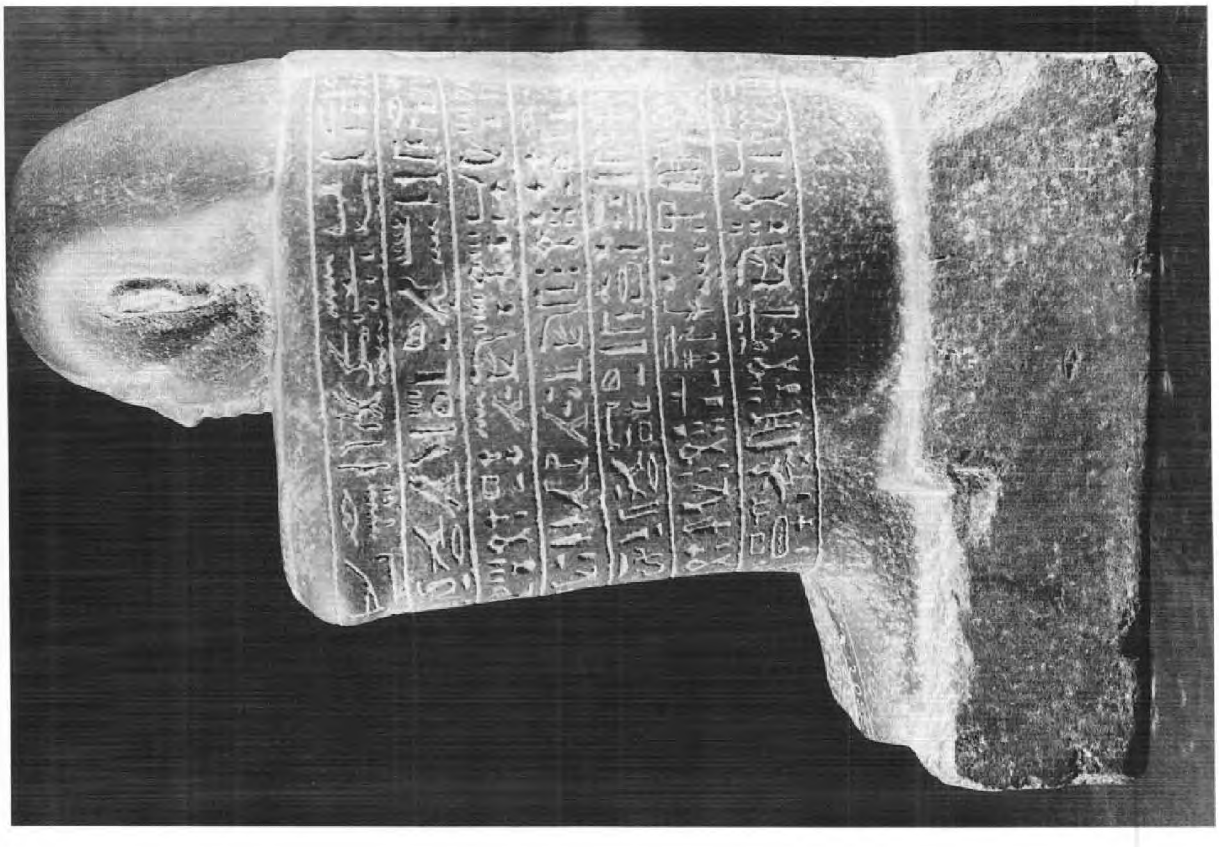

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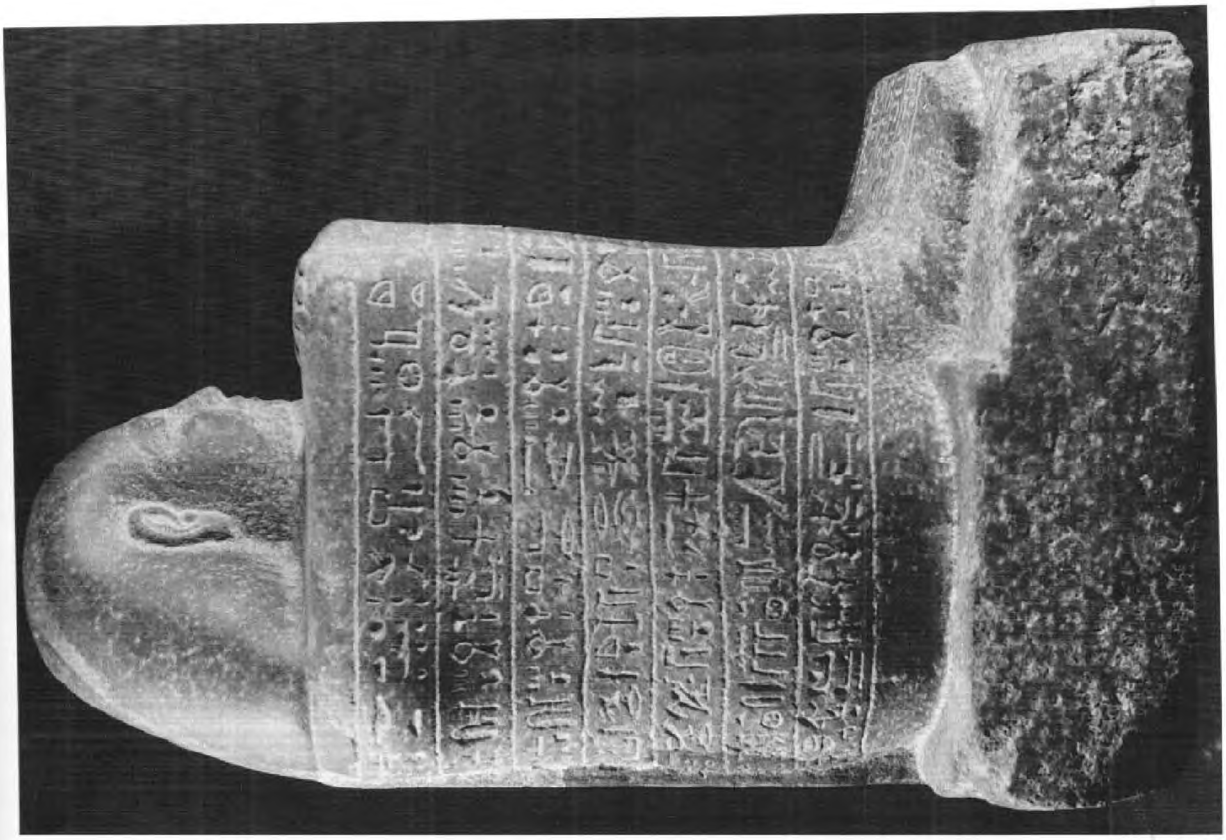

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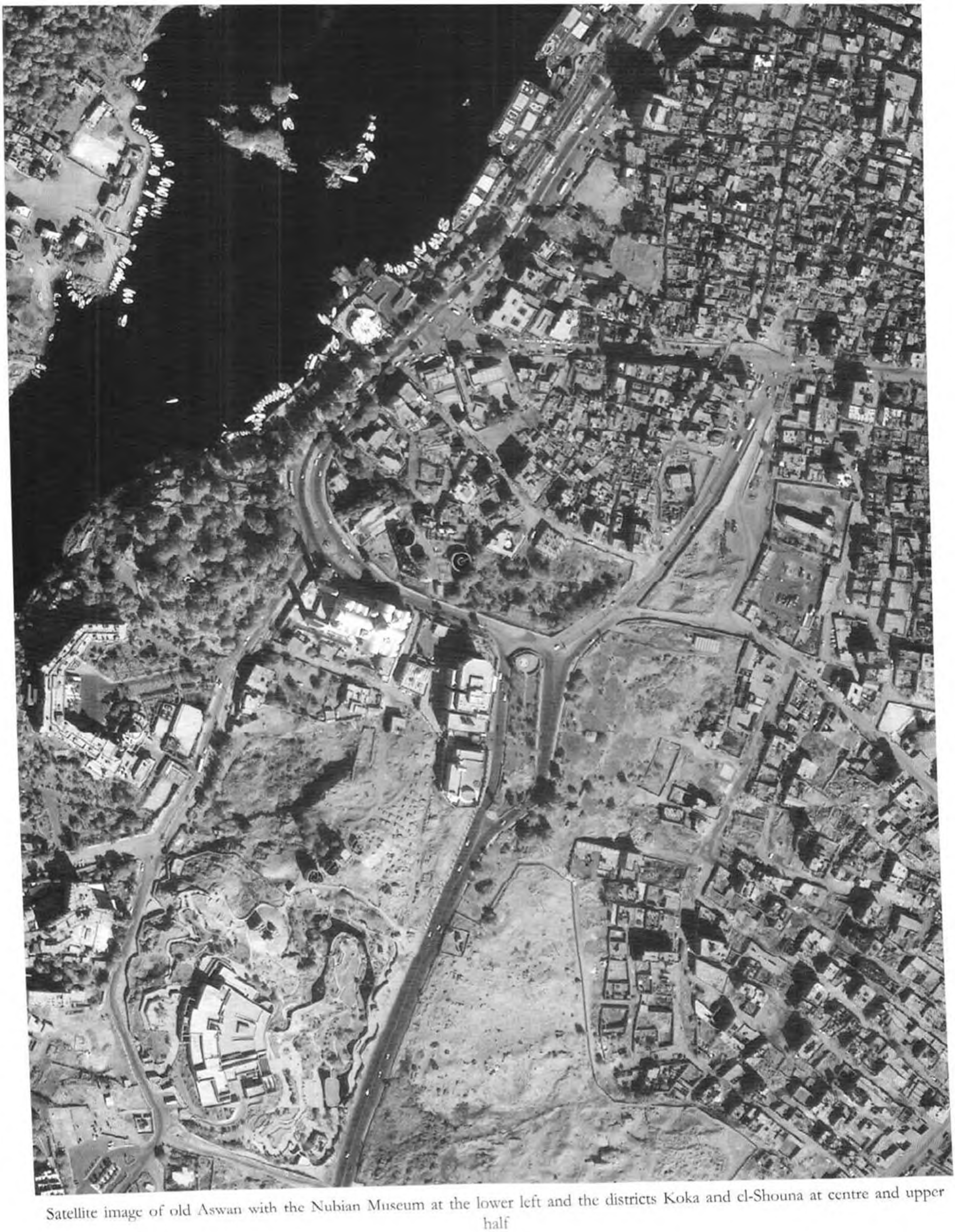
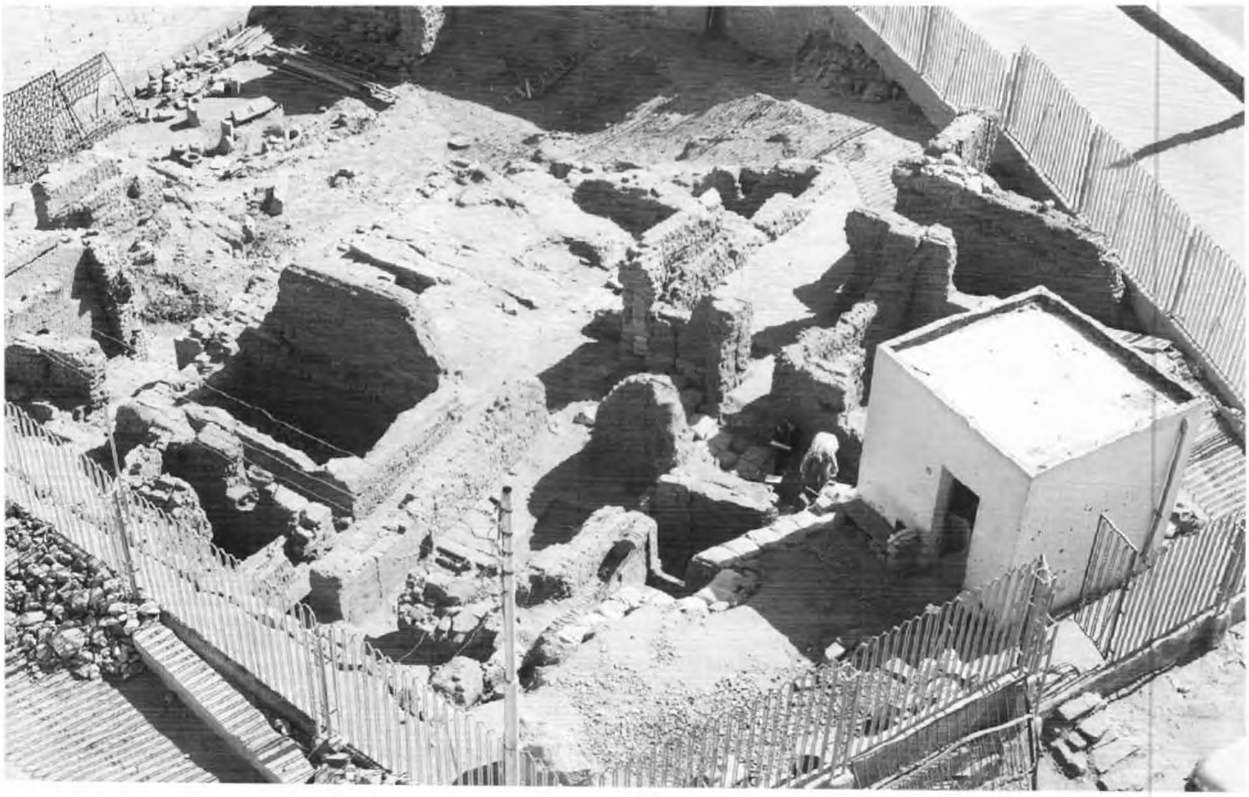
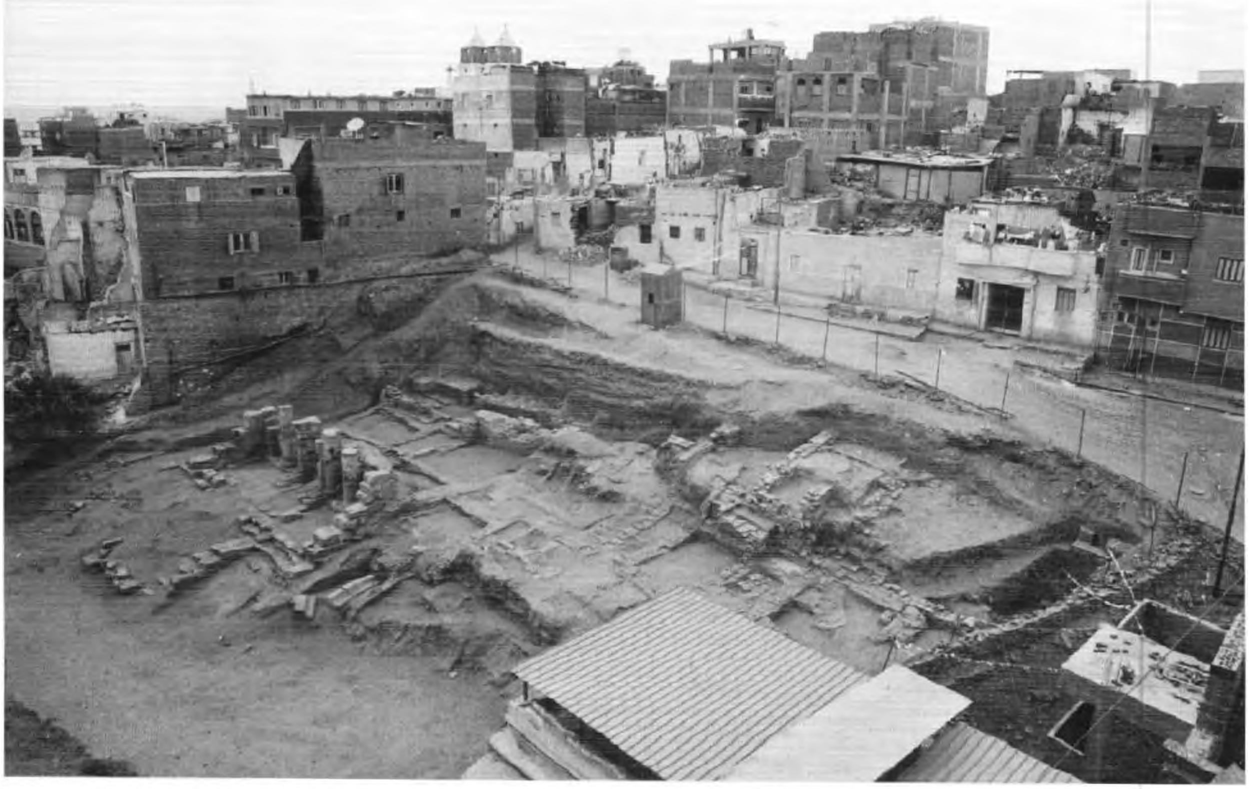


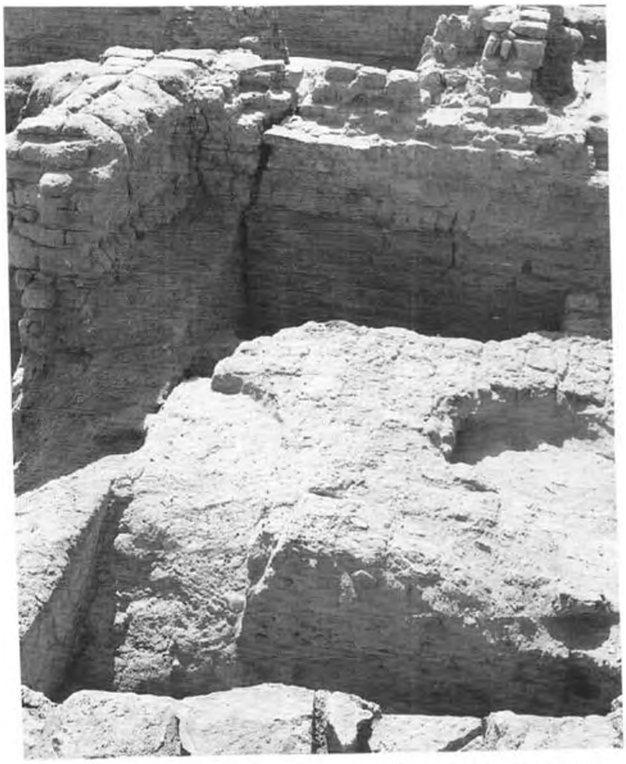
Satellite image of old Aswan with the Nubian Museum at the lower left and the districts Koka and el-Shouna at centre and upper half



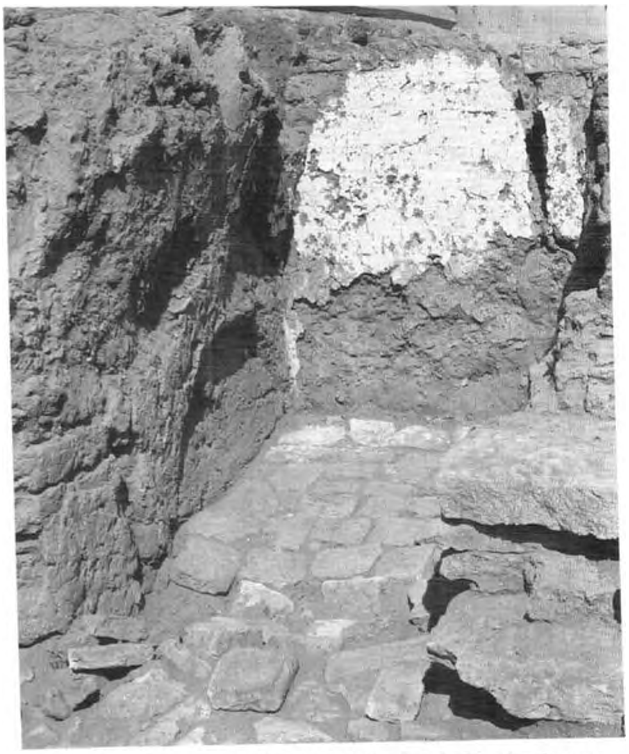
a) Area 1. Overview of the southern sector after the 1st season



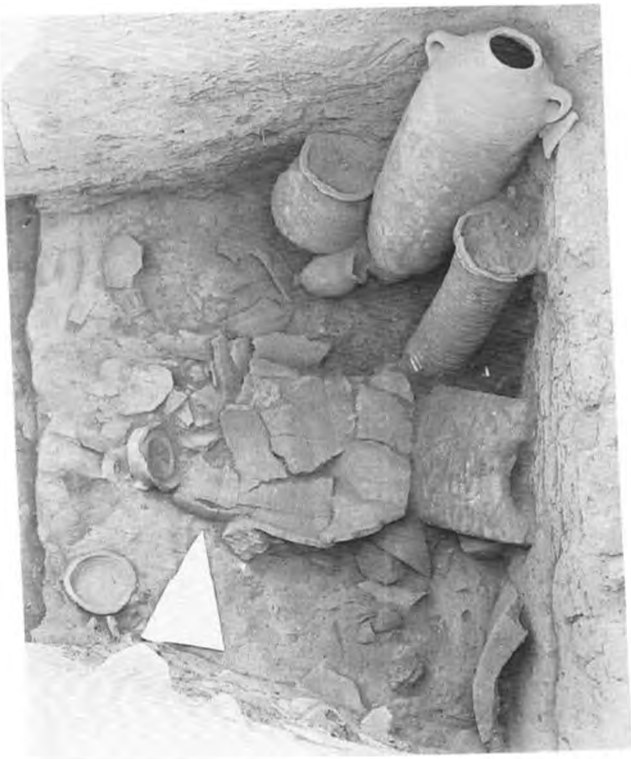
b) Area 3. Temple of Domitian and surrounding structures at the end of the 2nd season. View from south-west



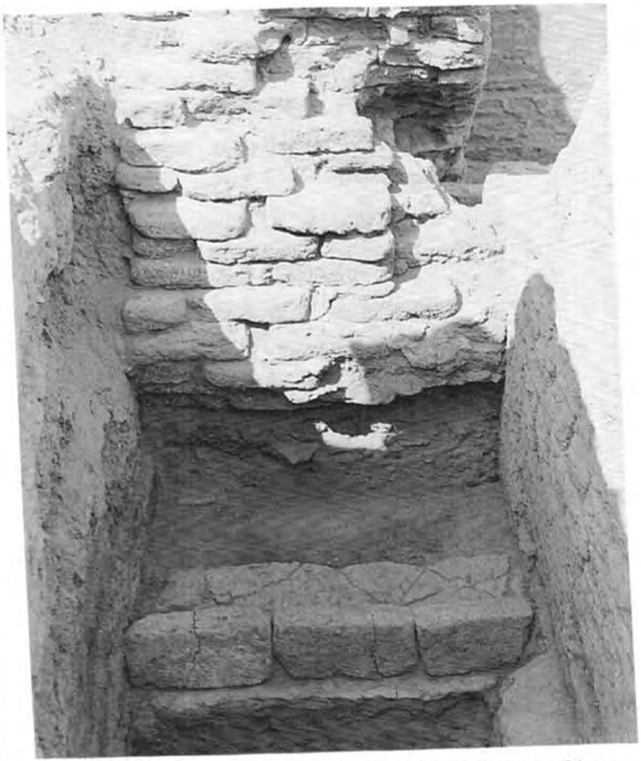
a) Area 1, House 1, Room a. View from north. Mudbrick-floor on top of complete vault



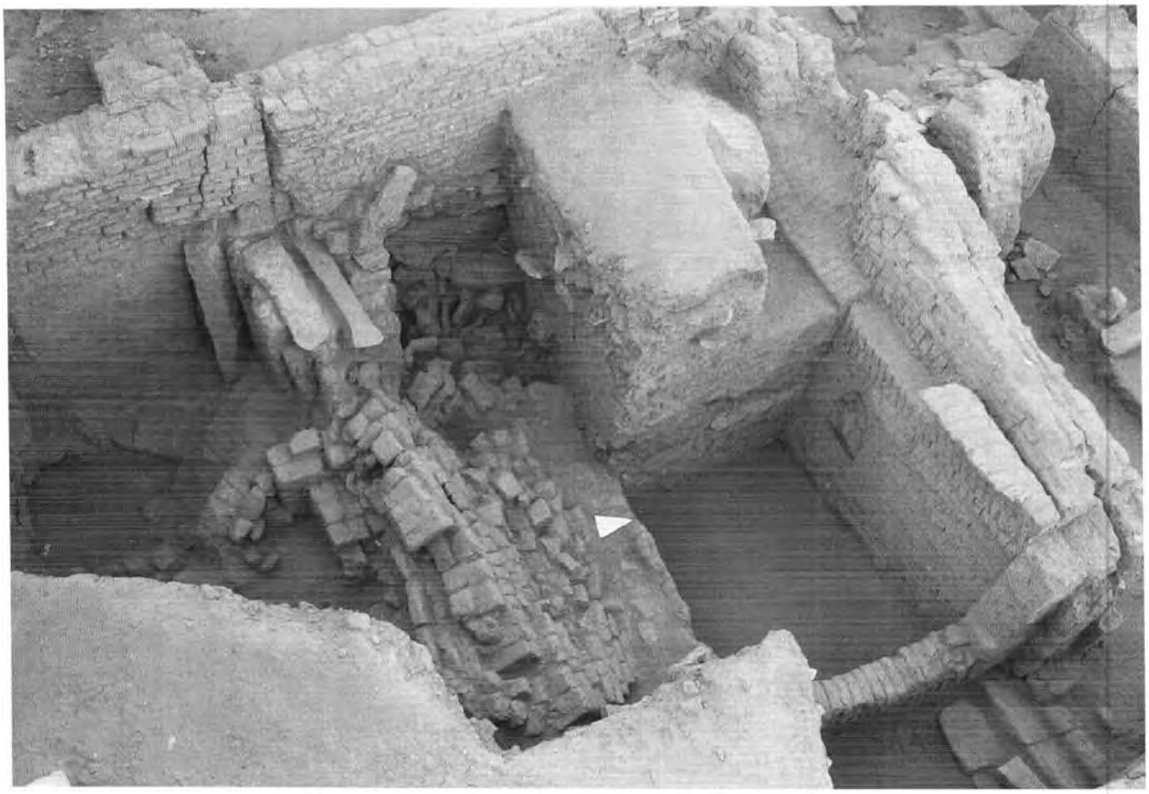
b) Area 1, House 8, Room a. Chamber inside the former staircase of House 1



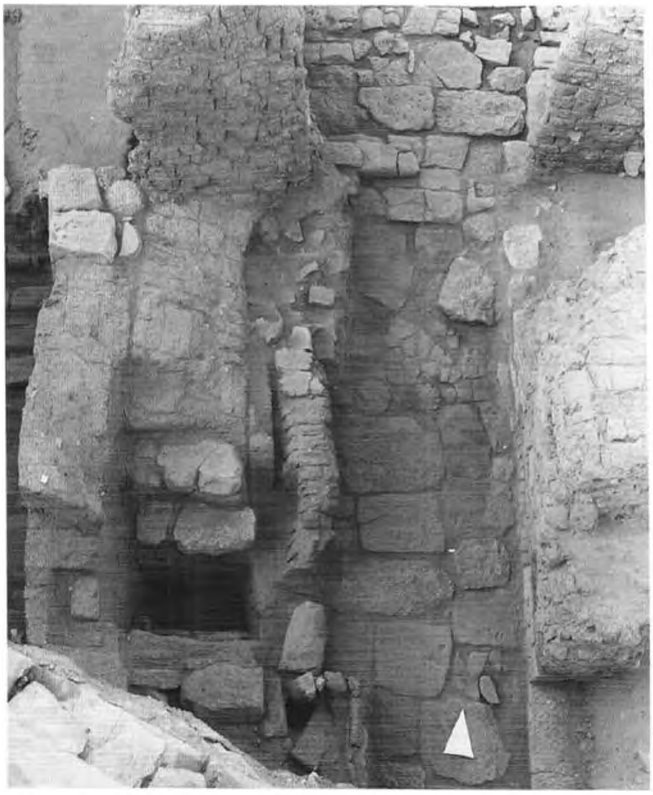
c) Area 1, House 9, Room b. View from south. Assemblage of finds on the upper floor level in the north-eastern corner of the room



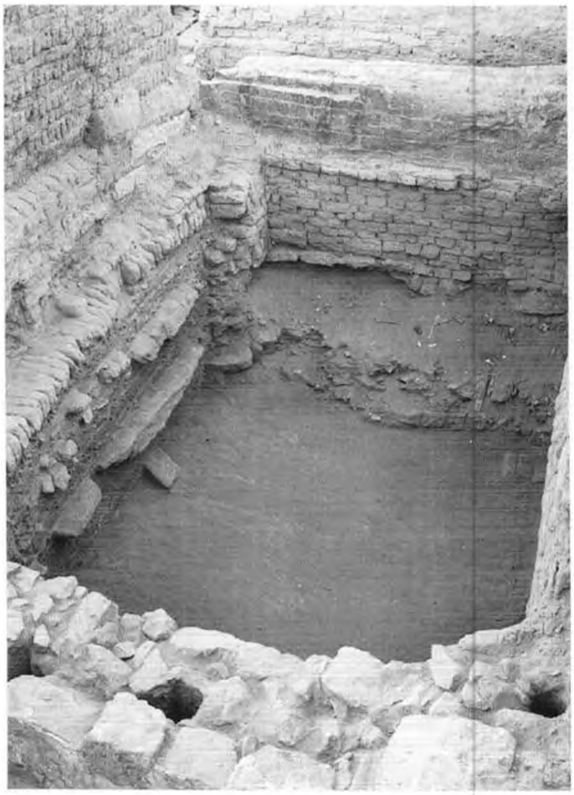
d) Area 1. Passage between Houses 1 and 2. Step of later staircase blocked by W 13 of House 7



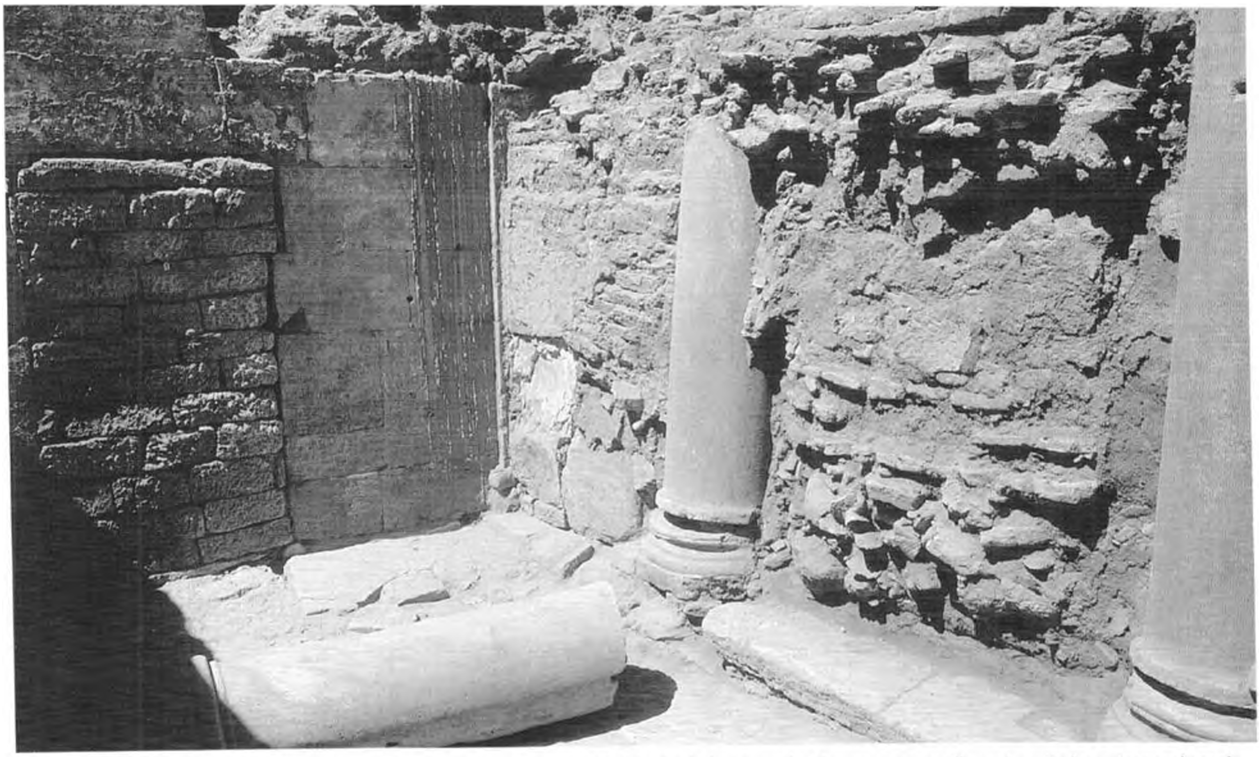
a) Area 1, House 9. View from south-east with collapsed W 158



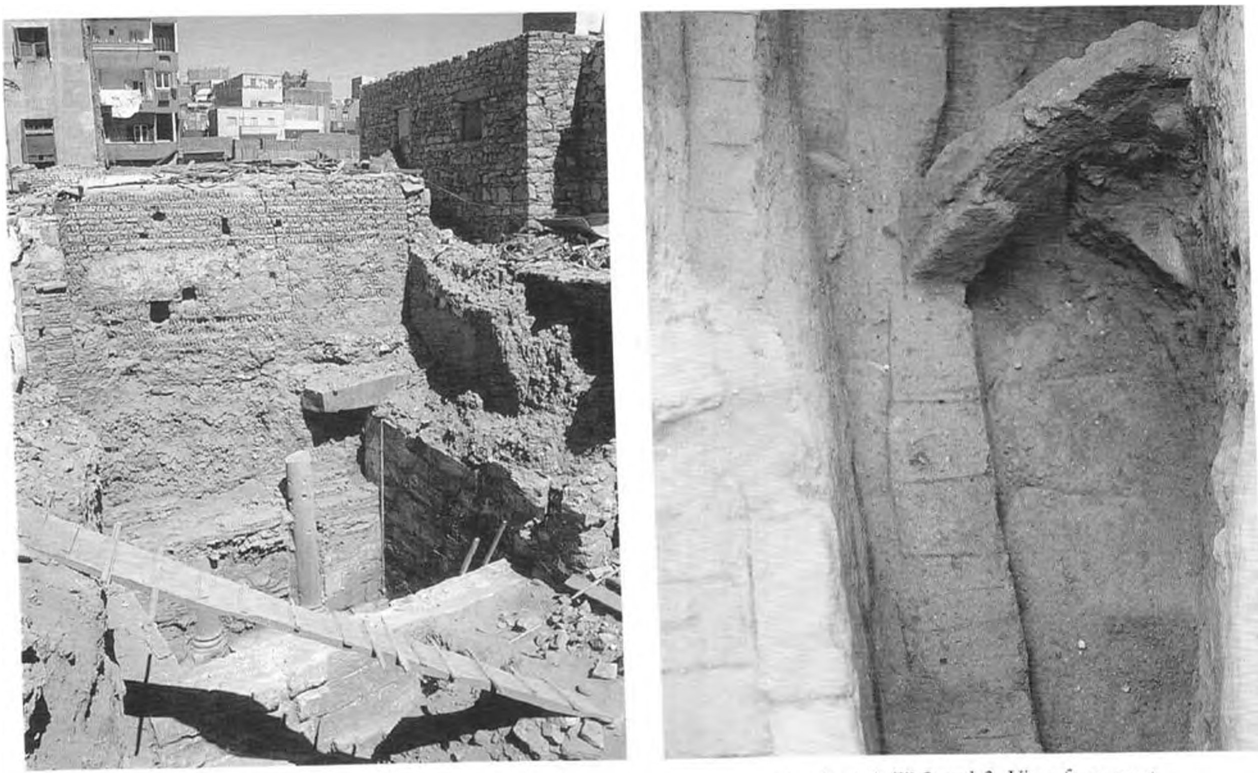
b) Area 1. Paved passage between Houses 9 and 10. View from south



c) Area 1, House 2, Room a. Walls surrounding a former open area. In the foreground retaining wall (W 19) with postholes for a fence. View from north-west

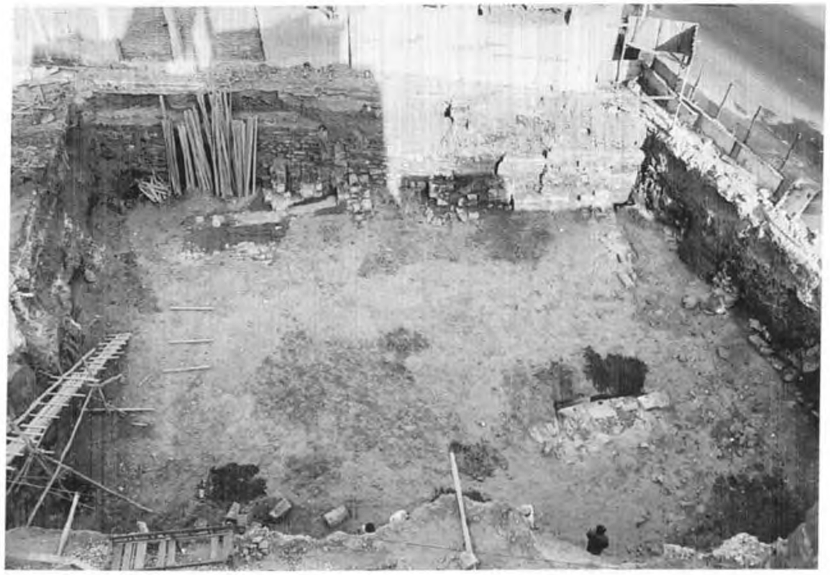


a) Area 5. Front and north-western corner of the shrine with blocked doorway in the western wall, and walled up intercolumnia. View from south-east

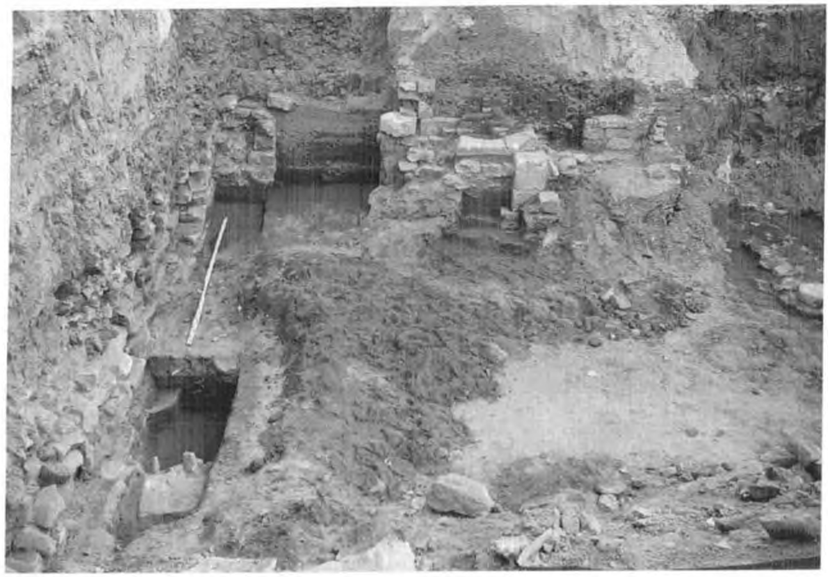


b) Area 5. Overview from south-west (march 2000)

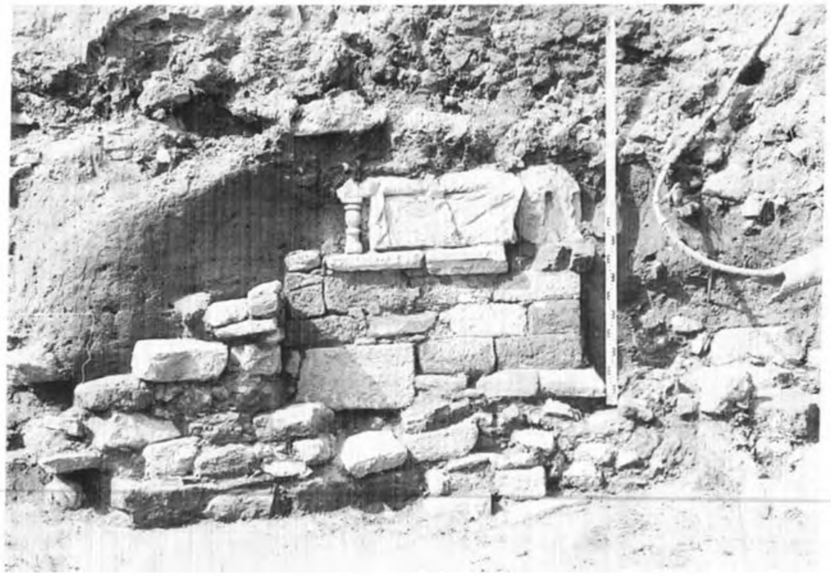
c) Area 4. W 2 and 3. View from west



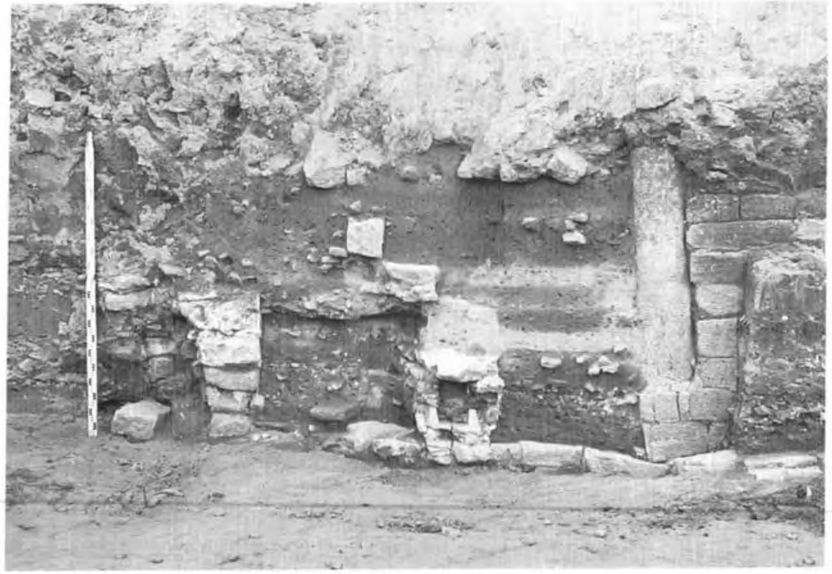
a) Area 9. View from east



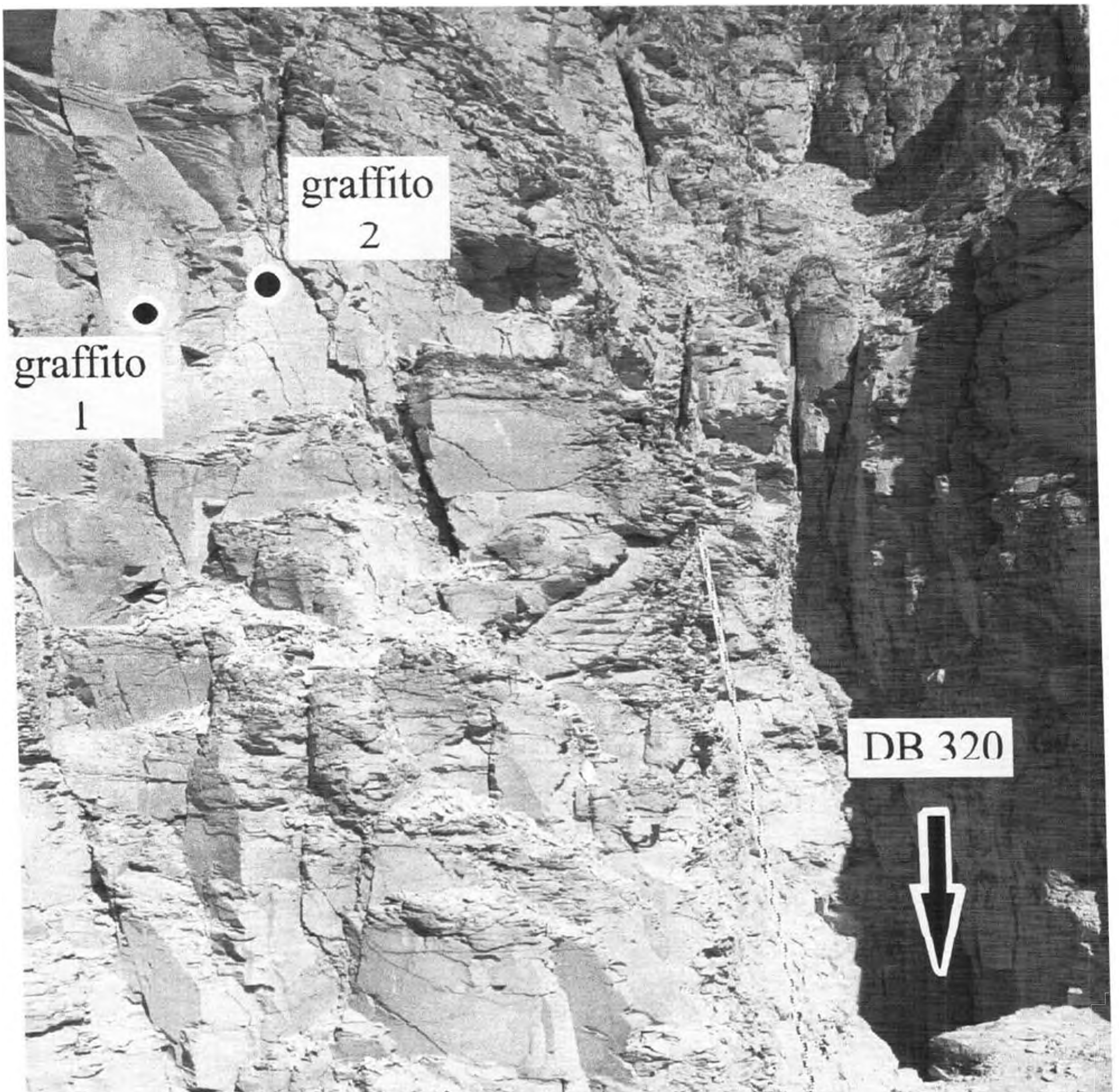
b) Area 9. Sector a at the end of the excavation



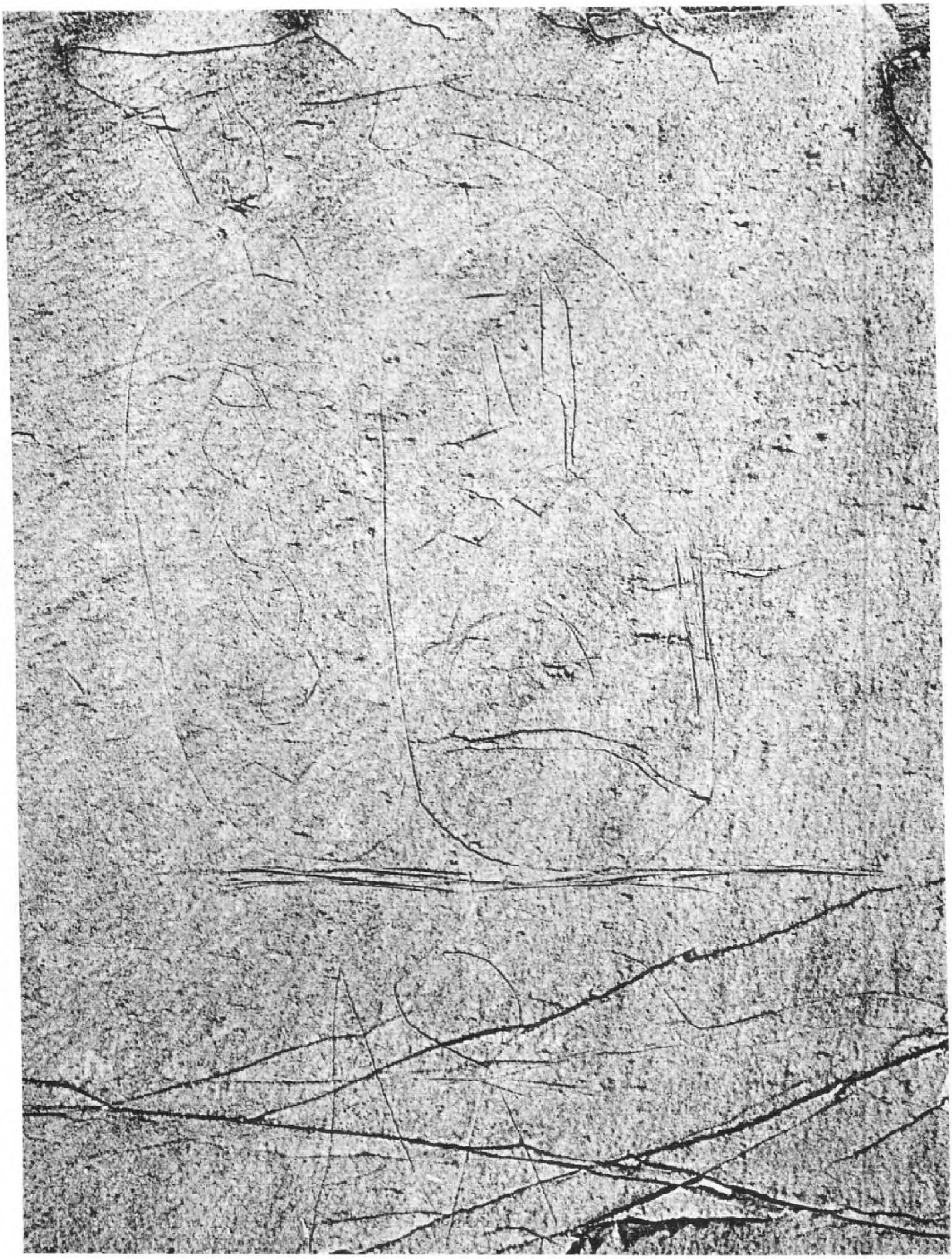
c) Area 9, Sector b. Northern section with W 12, 13 and 14



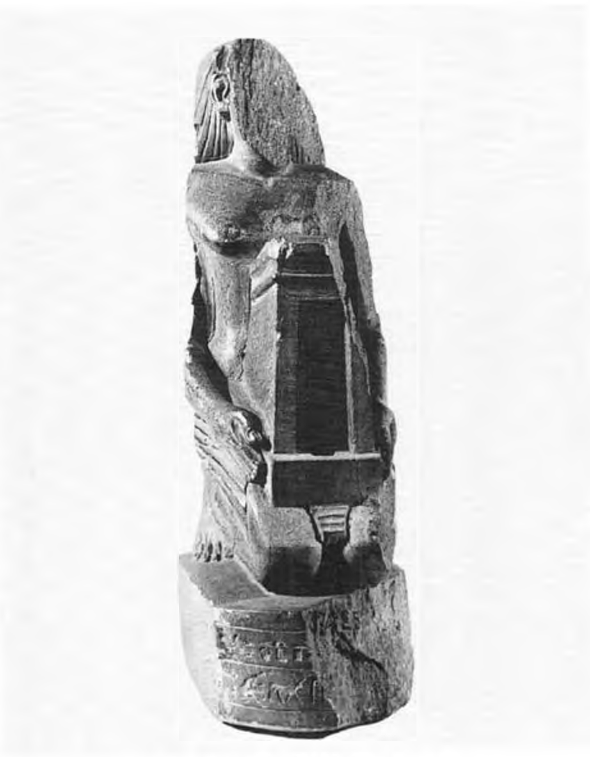
d) Area 9, Sector b. Eastern section with street between W 1 and W 9



View on DB 320 with position of Antef Nubkheperre's graffiti (Photo: SLAWOMIR RZEPKA)



Graffito 1 (Photo: Slawomir Rzepka)



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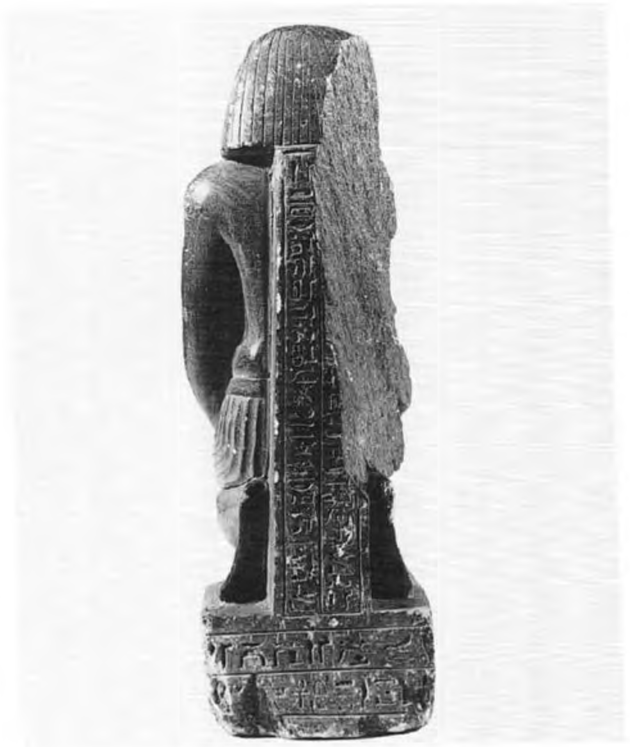

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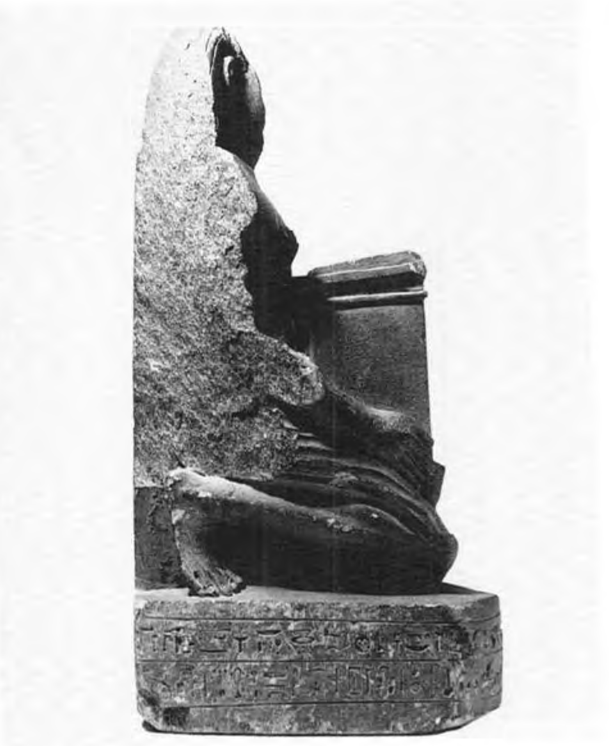

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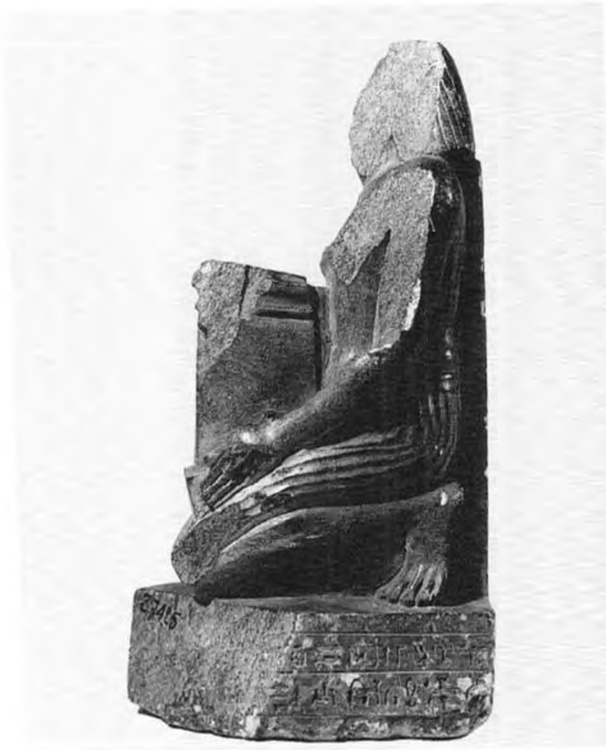

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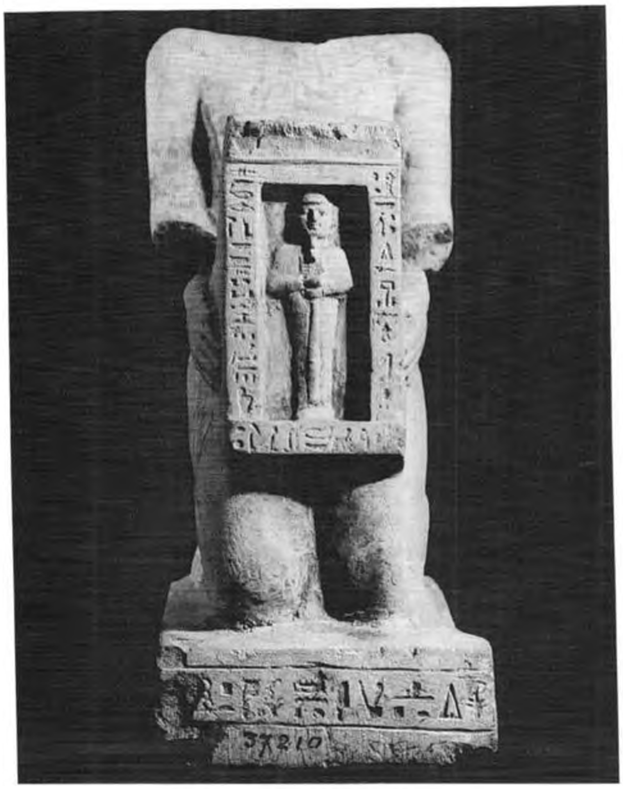

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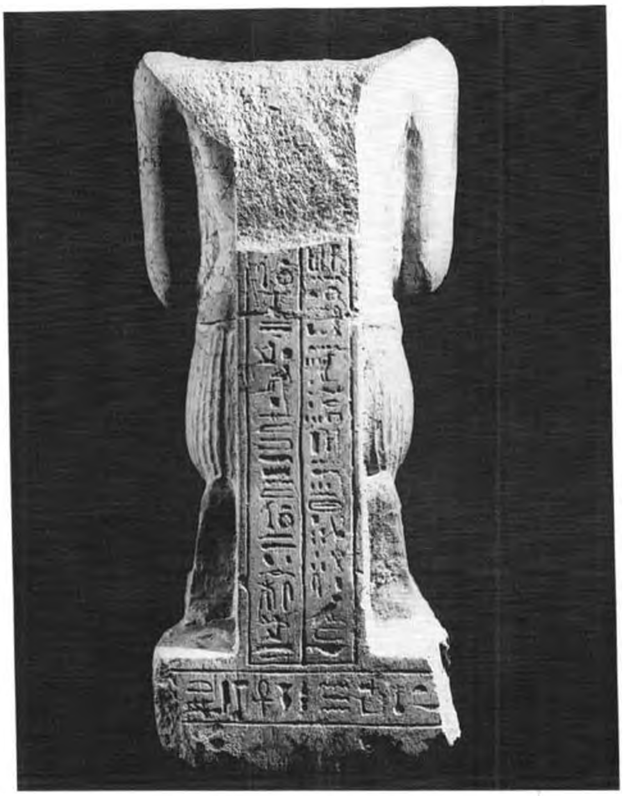
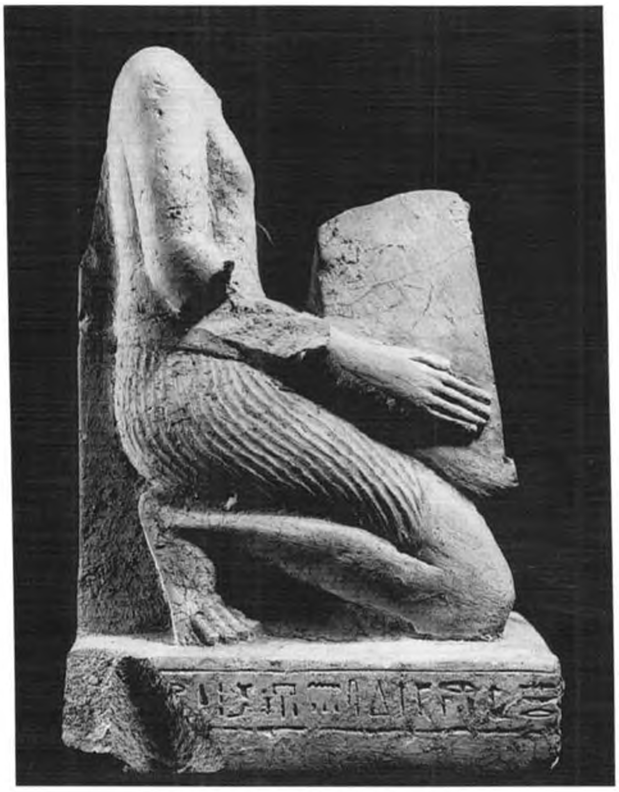
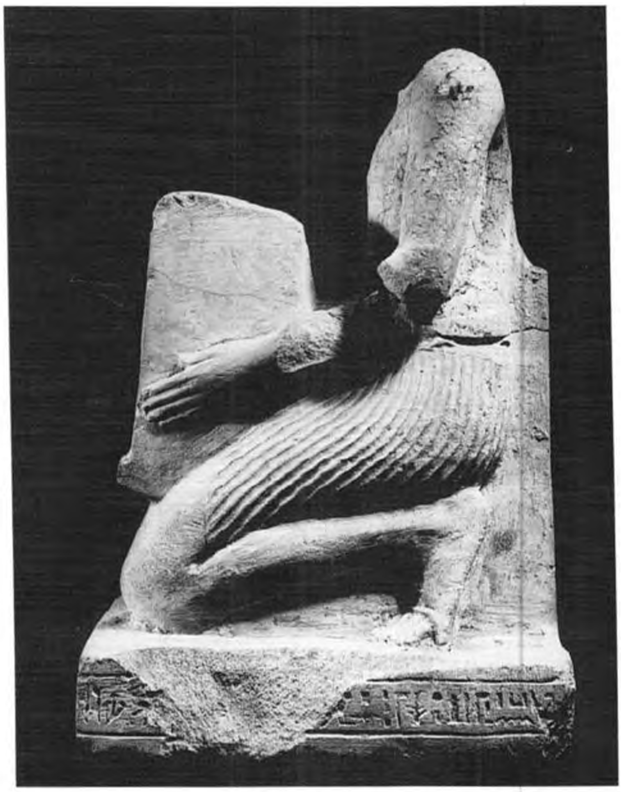


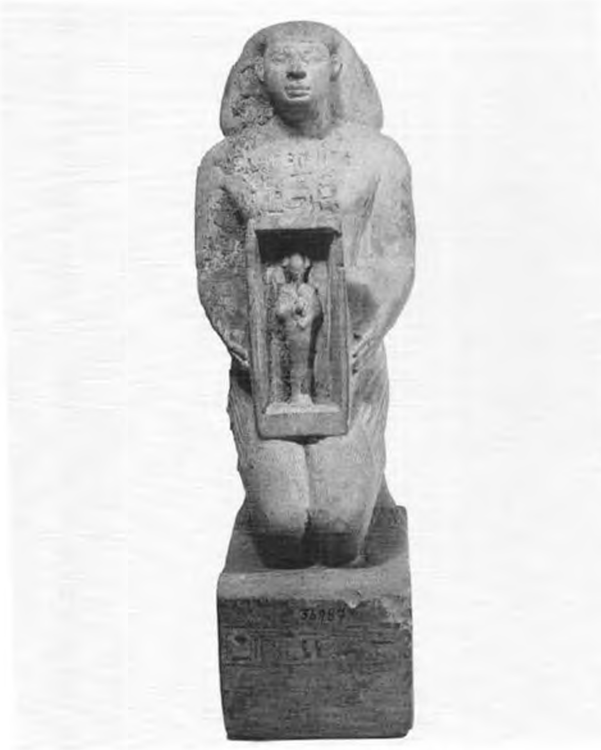
b) Kairo JE 37210, Rückseite



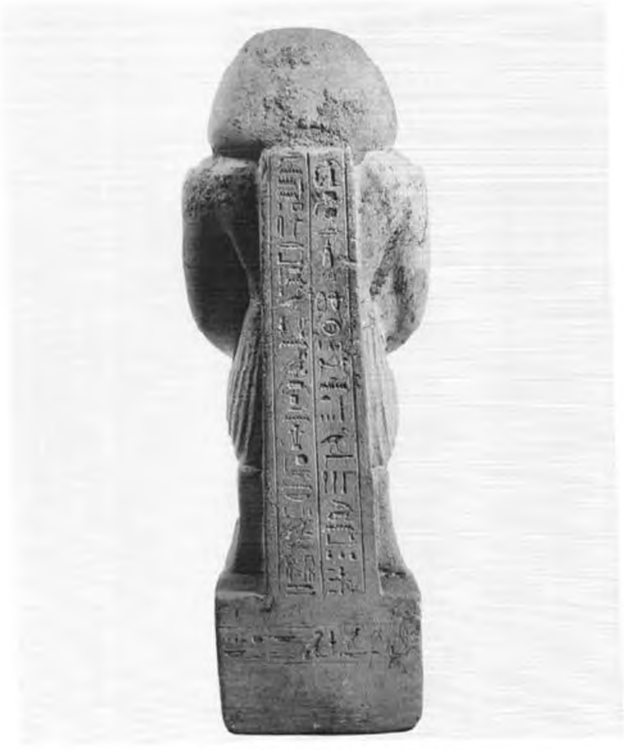
c) Kairo JE 37210, rechte Seite



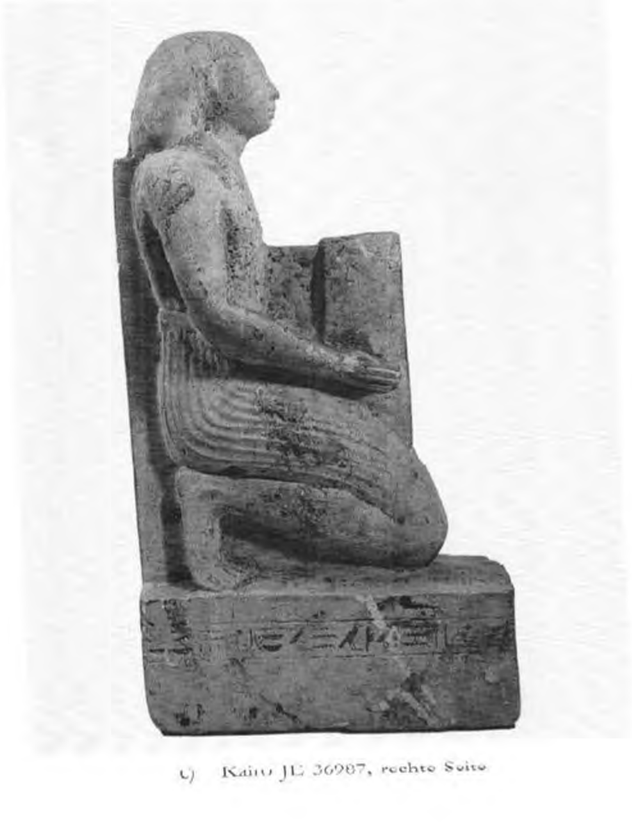
d) Kairo JE 37210, linke Seite



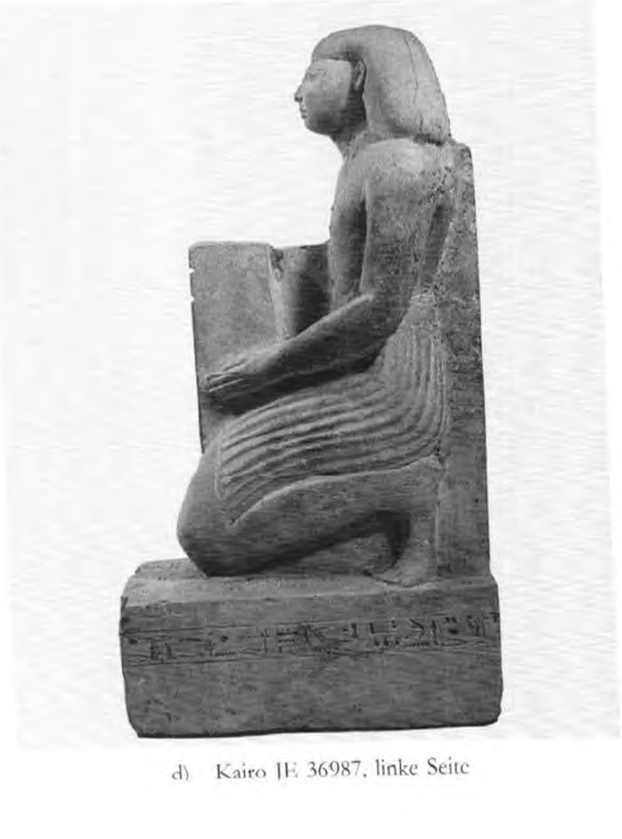
a) Kairo JE 36987, Vorderseite



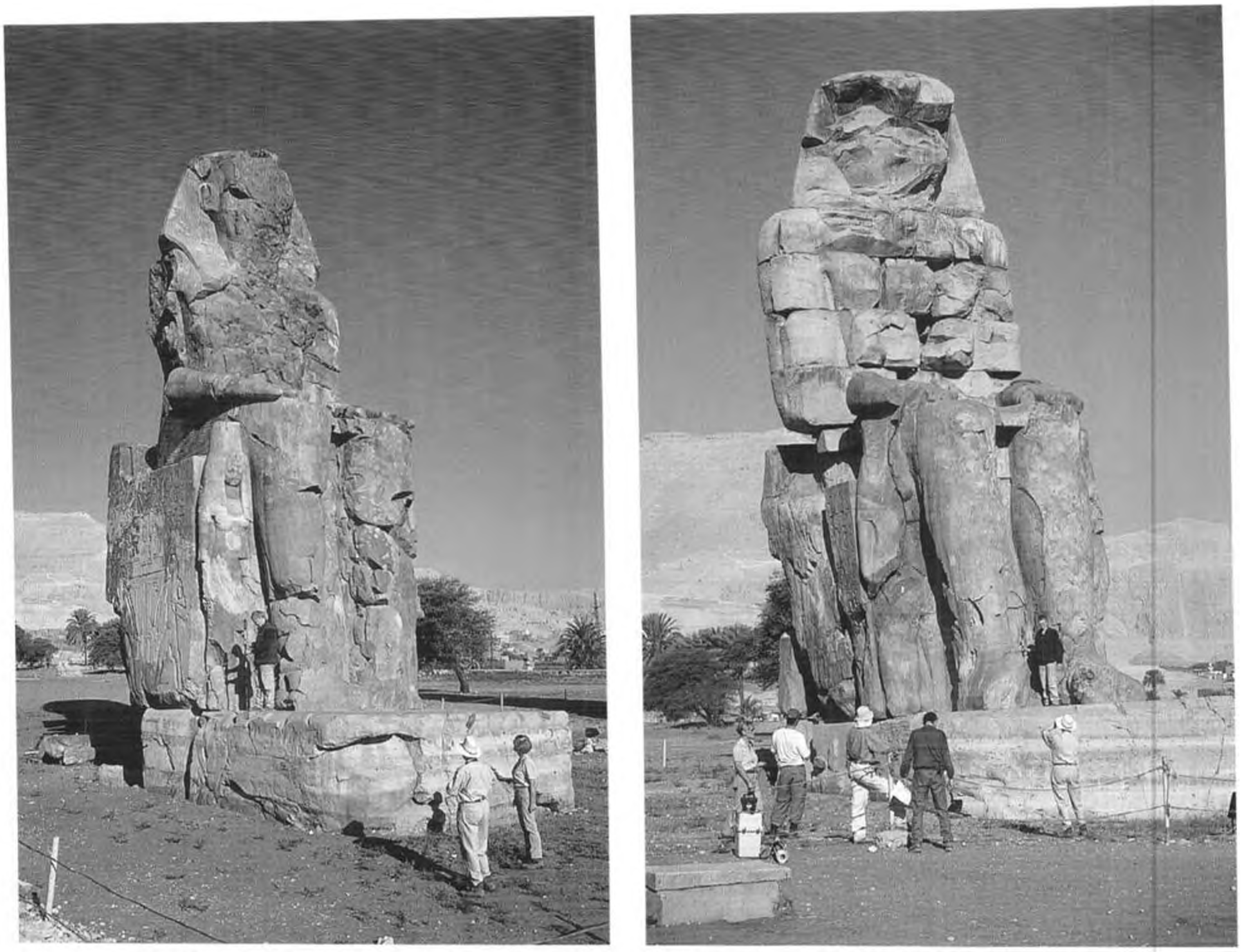
b) Kairo JE 36987, Rückseite



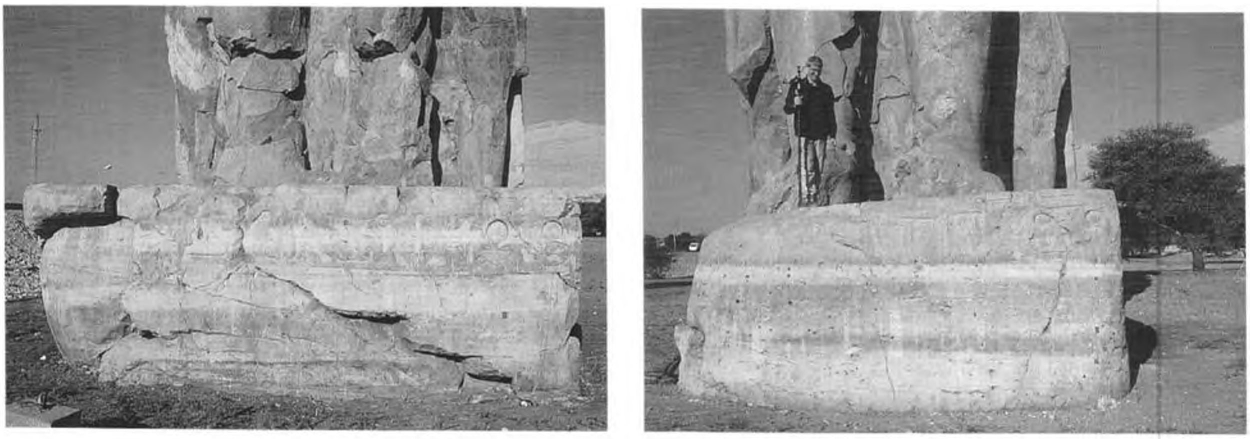
c) Kairo JE 36987, rechte Seite



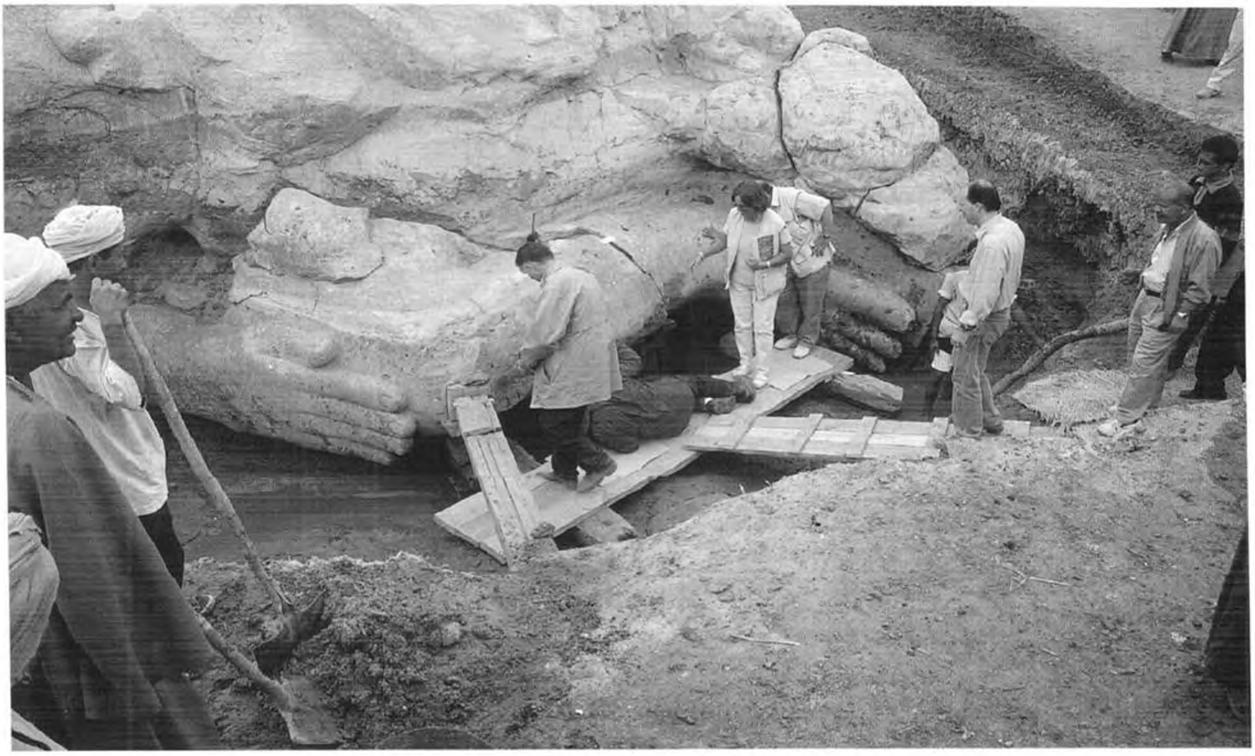
d) Kairo JE 36987, linke Seite



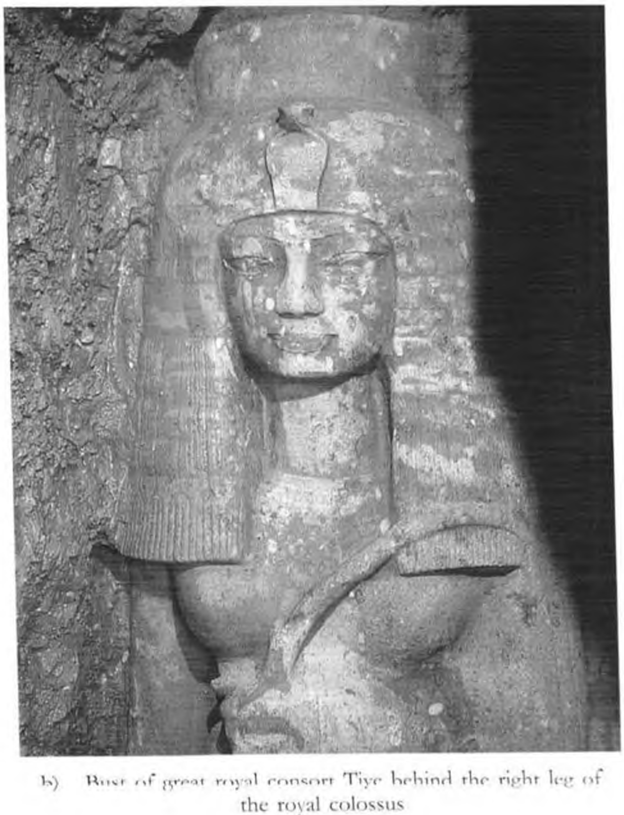
a, b) Measuring and mapping the Memnon Colossi by the COMMAP team



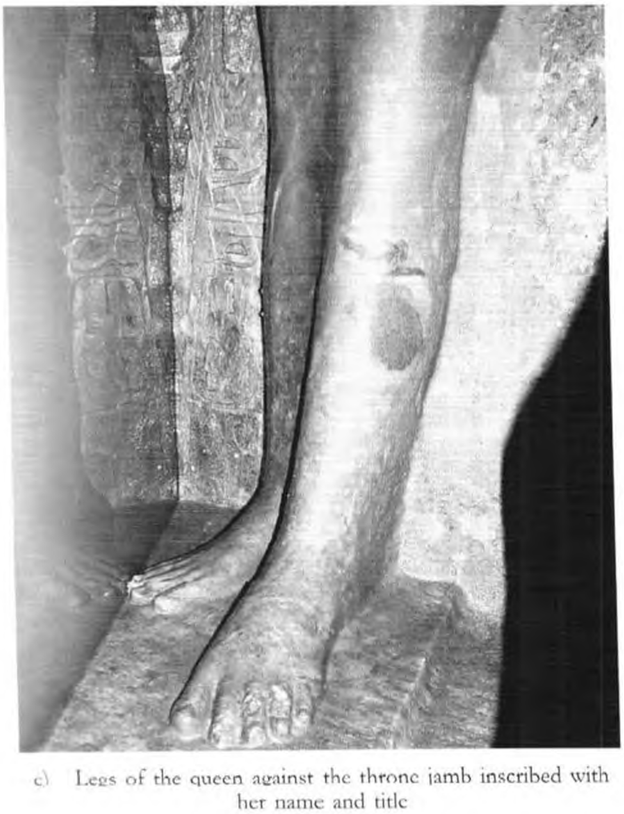
c, d) Mapping of inundation levels on the pedestals of the Memnon Colossi



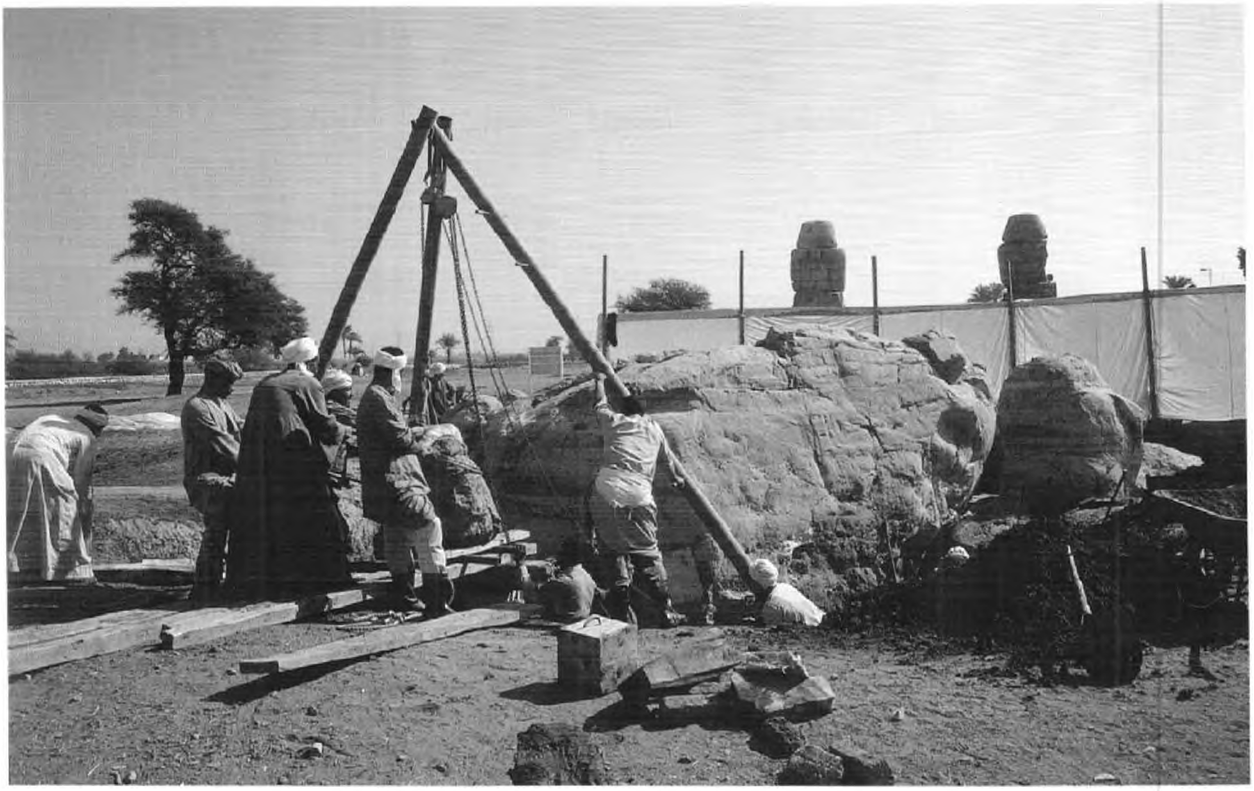
a) The North Colossus of the Second Pylon during the visit of Dr. Zahi Hawass



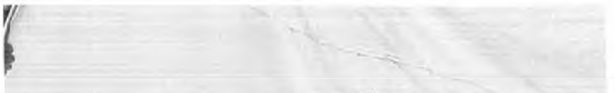
b) Bust of great royal consort Tiye behind the right leg of the royal colossus



c) Legs of the queen against the throne jamb inscribed with her name and title

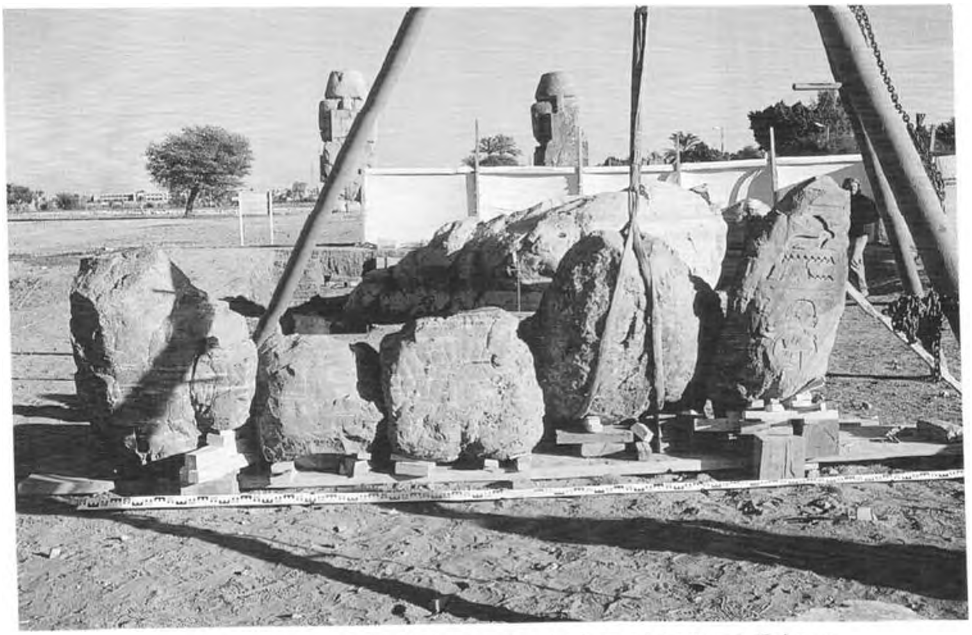


a) Back of the North Colossus of the Second Pylon during conservation

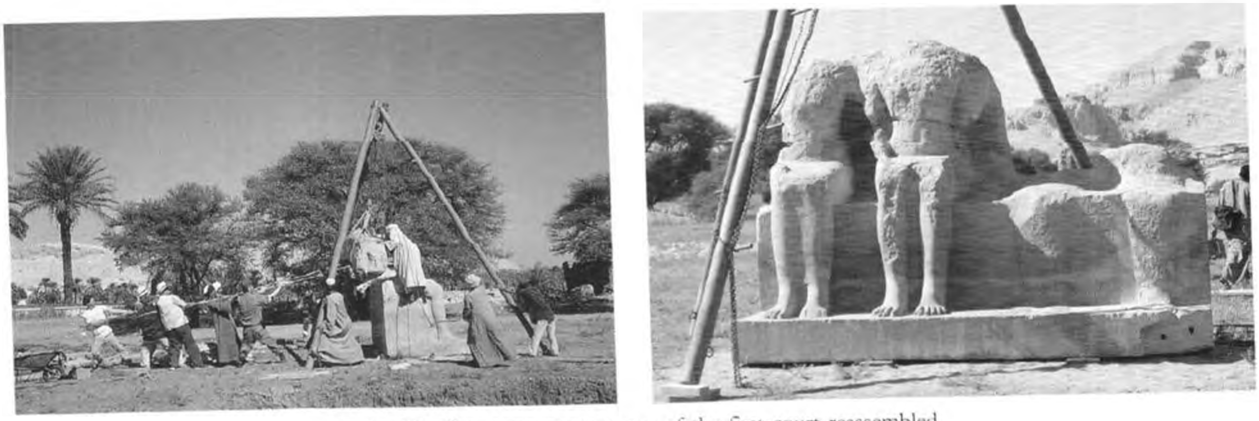


b) Block from the left side of the base decorated with a bound northern foe

c) Trial assemblage of three blocks from the rear right (south) side of the North Colossus



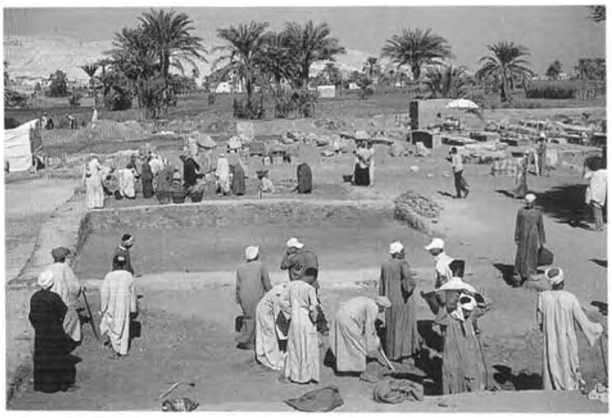
a) Trial grouping of the blocks forming the base of the North Colossus



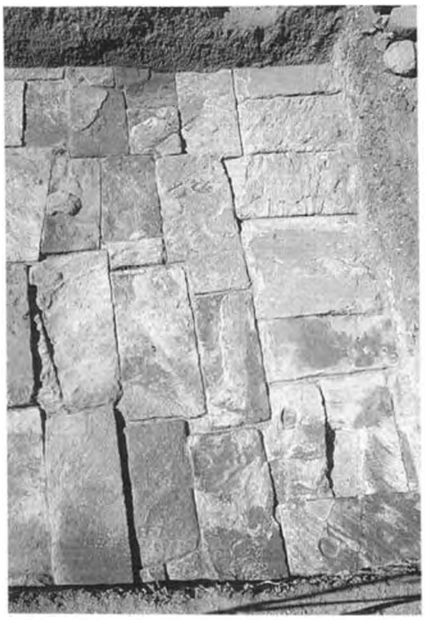
b, c) The limestone group statue of the first court reassembled

d) Parts of the alabaster colossi of the Third Pylon defoliated

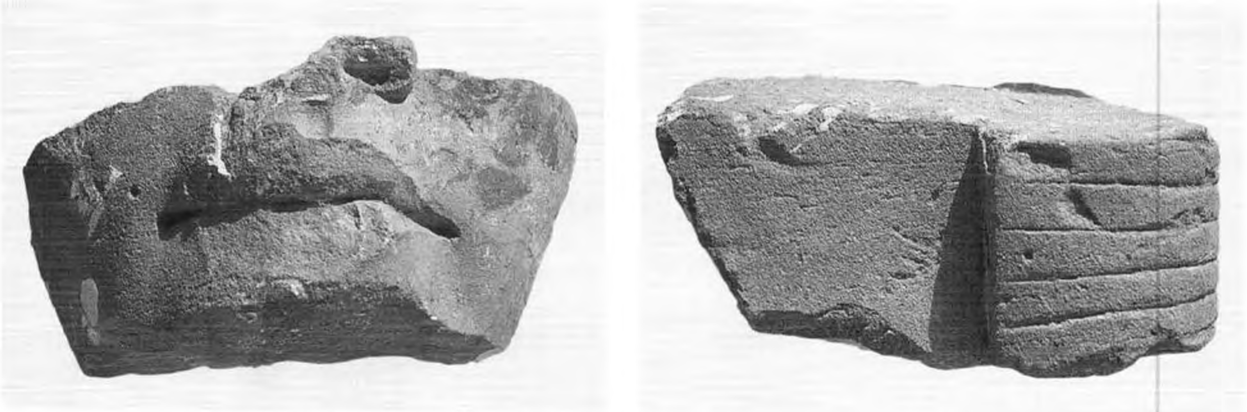
e) The ramp leading to the Peristyle Court before mapping



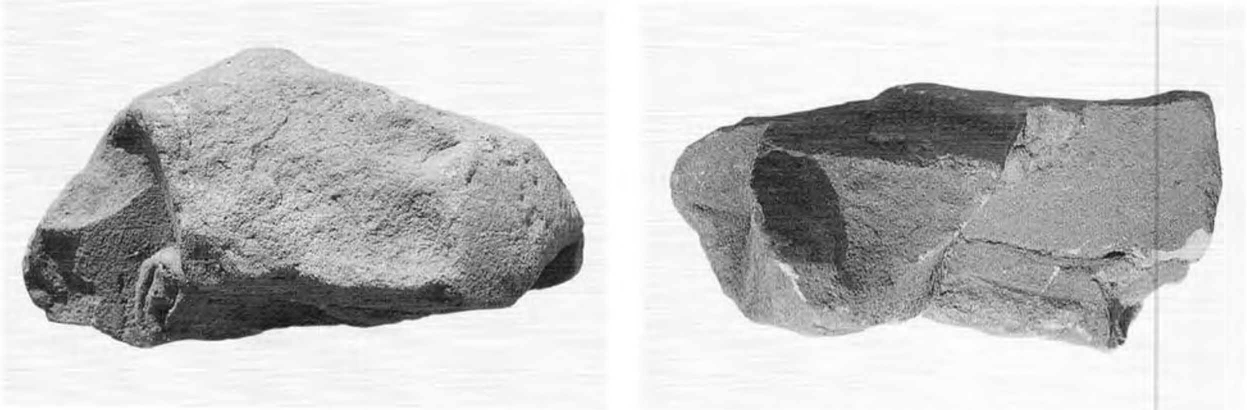
a) Clearance in the south part of the Peristyle Court squares 990 S1, S2, S3 (PHS 4, 5, 6)



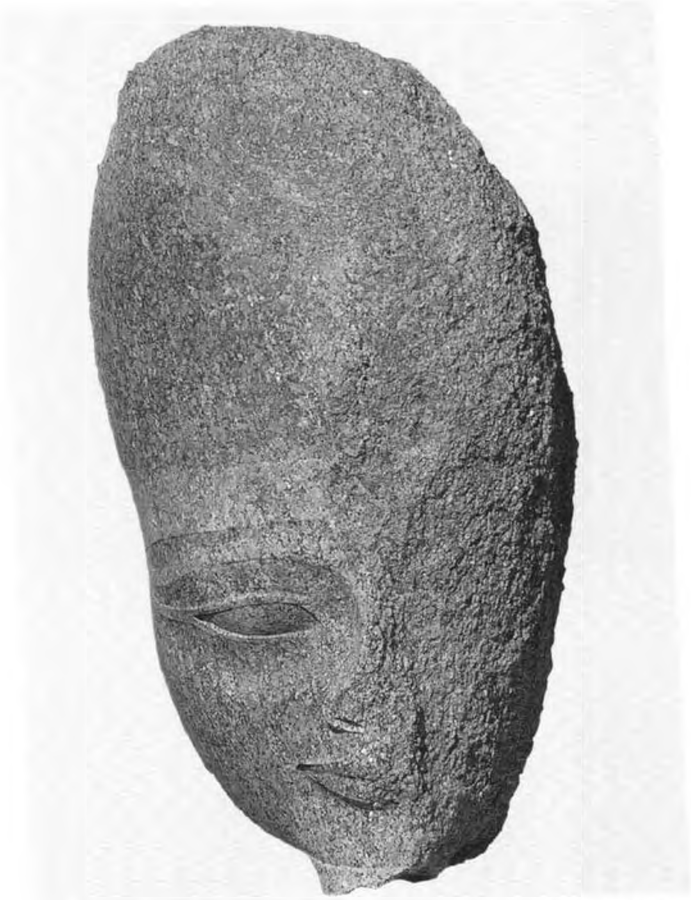
b) Original pavement in square 990 S1 (PHS 4)



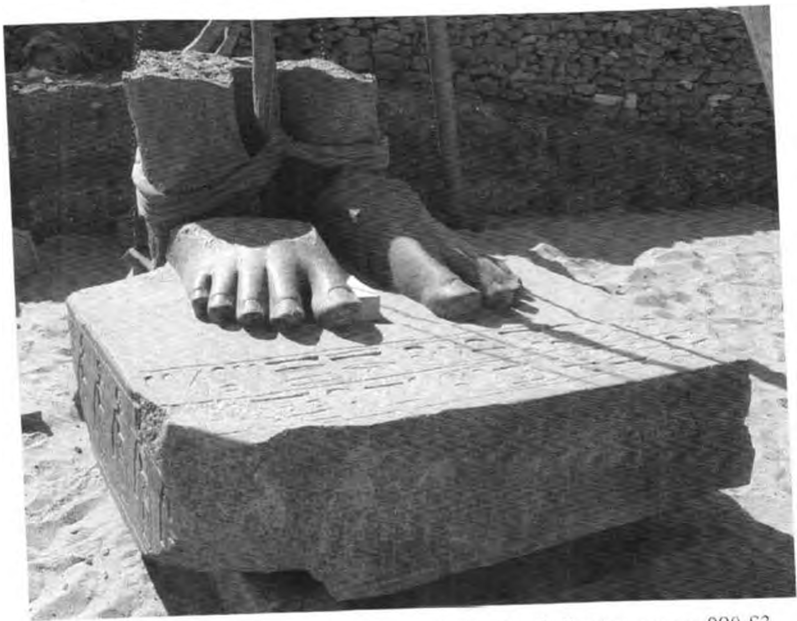
c, d) Parts of royal face and beard from a large sandstone statue in square 990 S1 (PHS 4)



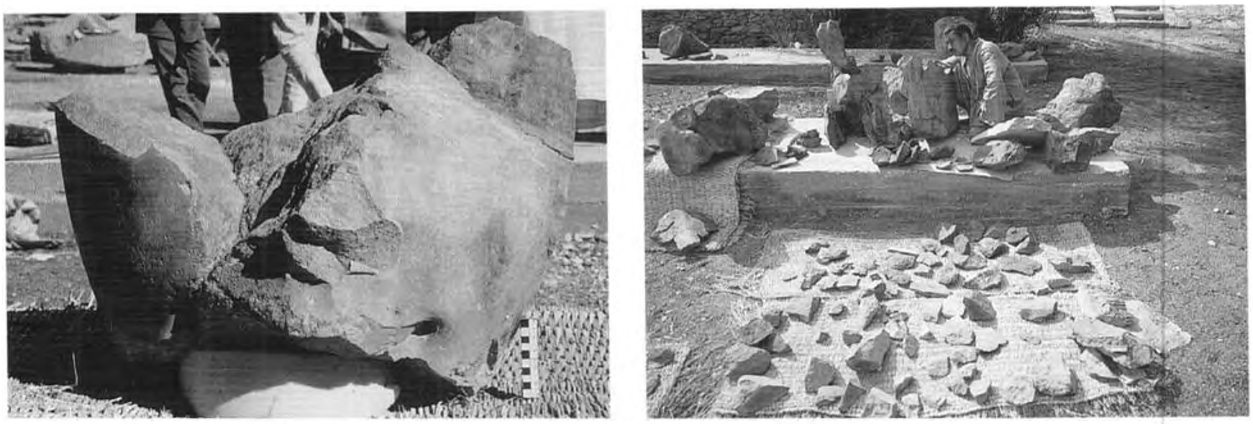
e, f) Fragments of royal heads from sandstone statues in square 990 S1 (PHS 4)



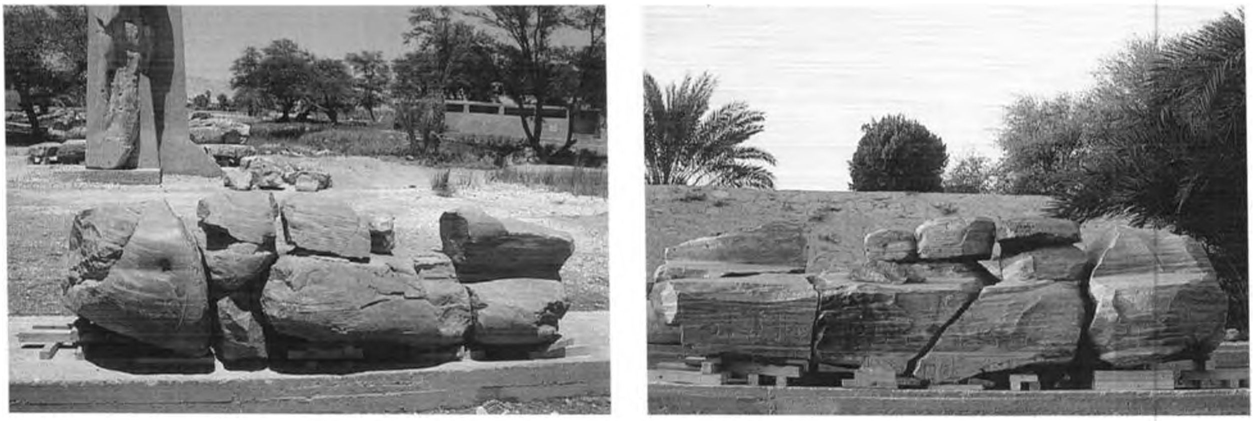
a) Head of a red granite royal colossus in square 990 S2 (PHS 5)



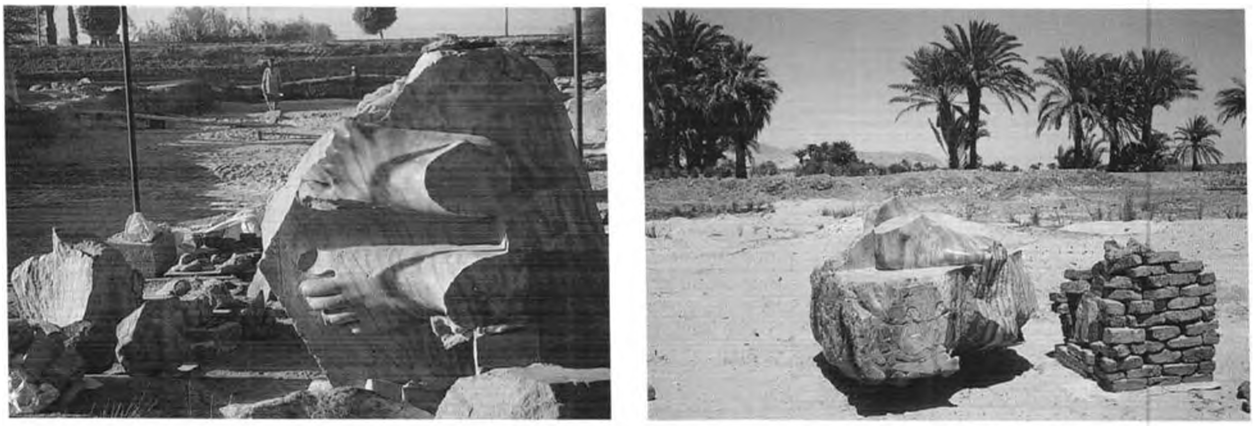
b) Feet and base of the royal colossus in the South Portico, square 990 S3
(PHS 6)



a, b) Fragments of head from royal quartzite colossus PWN III, in restoration

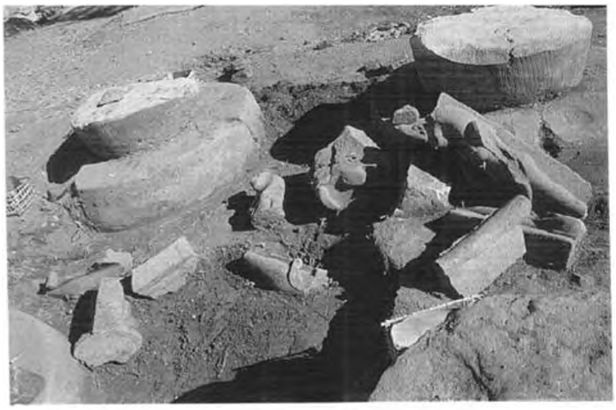


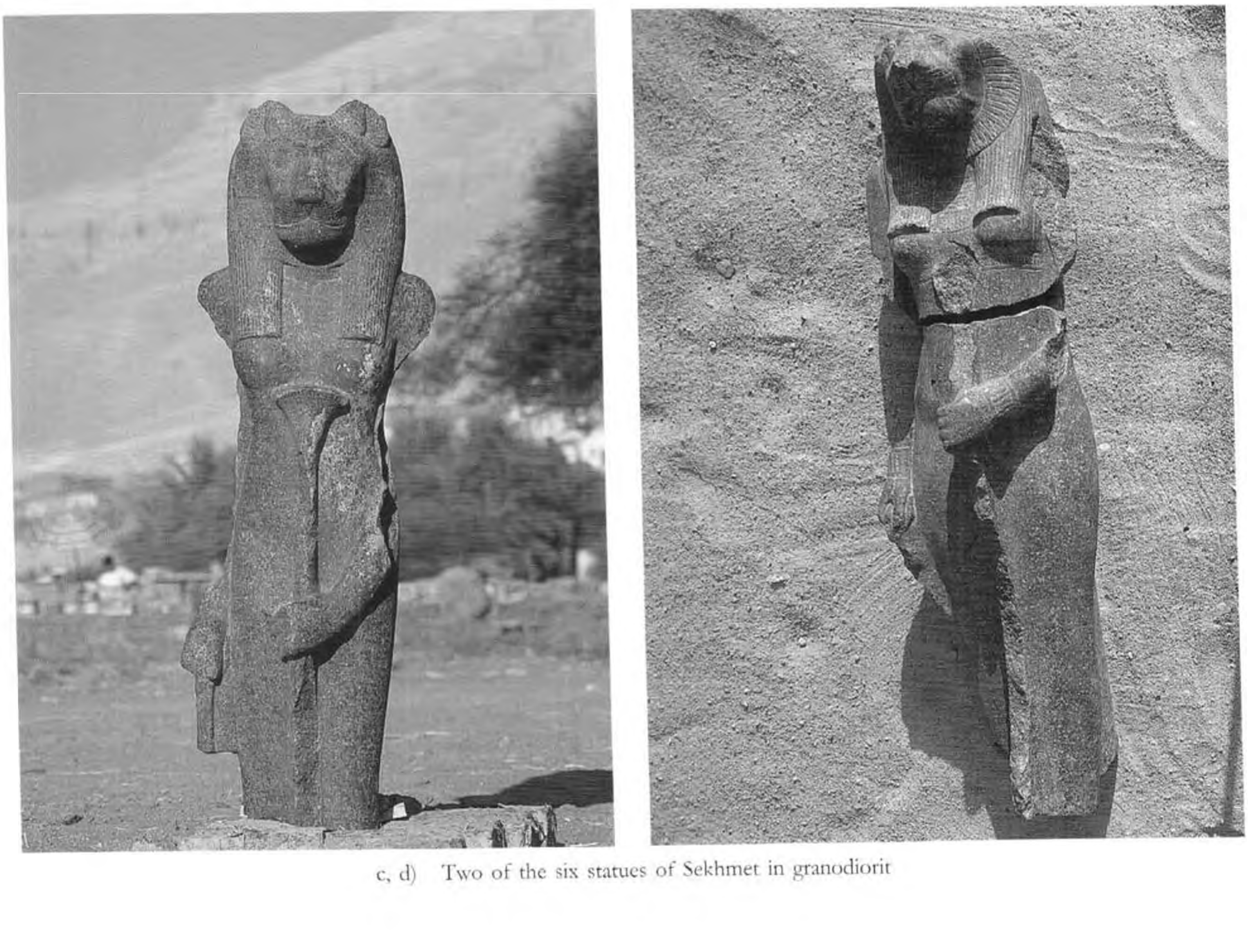
c, d) Torso of the royal quartzite colossus PWN I in a trial grouping

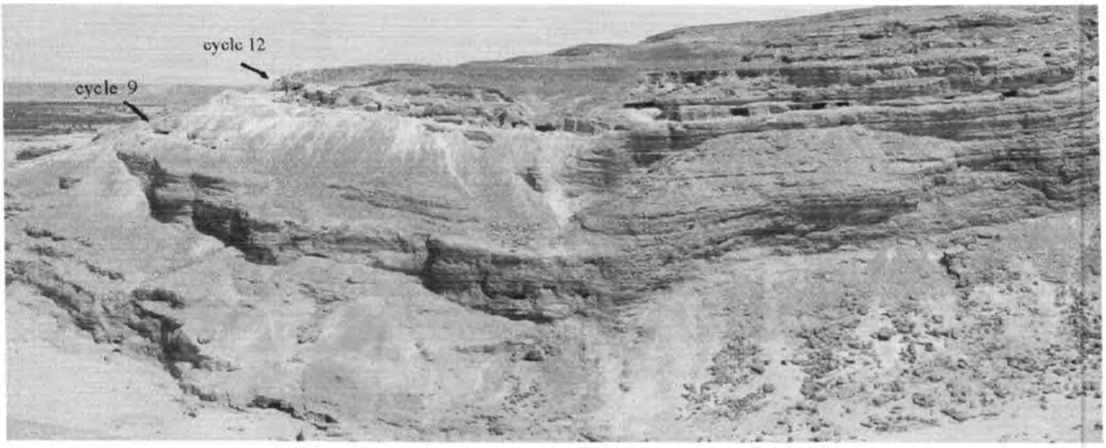


e, f) Feet and base of the royal quartzite colossus PWN V, in restoration

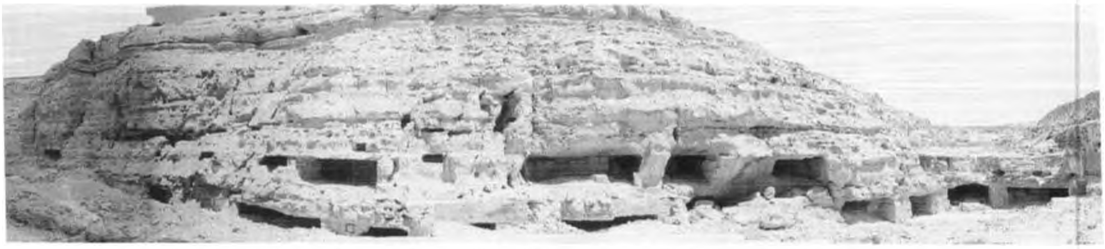
a) Beginning of the clearance of the Hypostyle Hall


b) Discovery of a modern cachette of Sekhmet statues

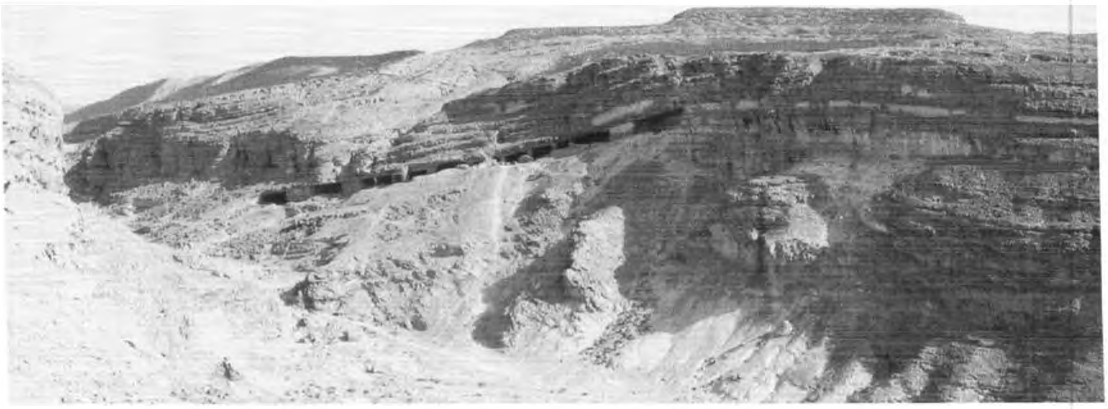

c, d) Two of the six statues of Sekhmet in granodiorit



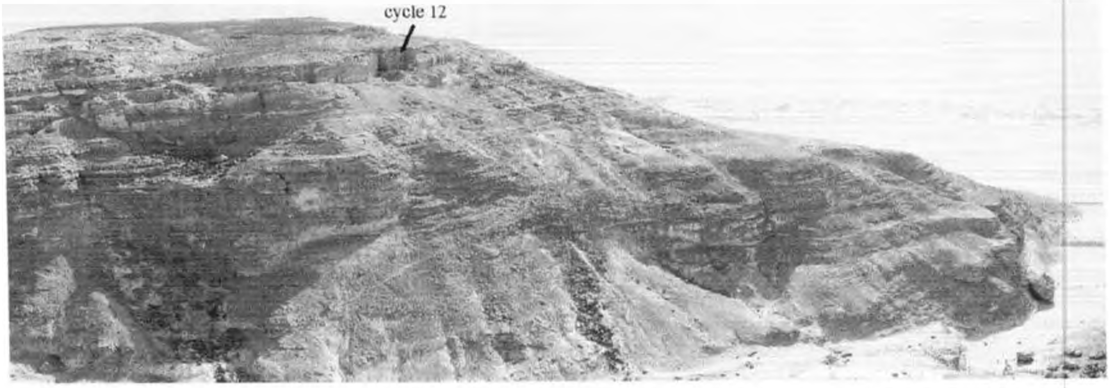
a) Wâdî Nakhla, north-west flank, with Middle Kingdom rock tombs and New Kingdom gallery quarries



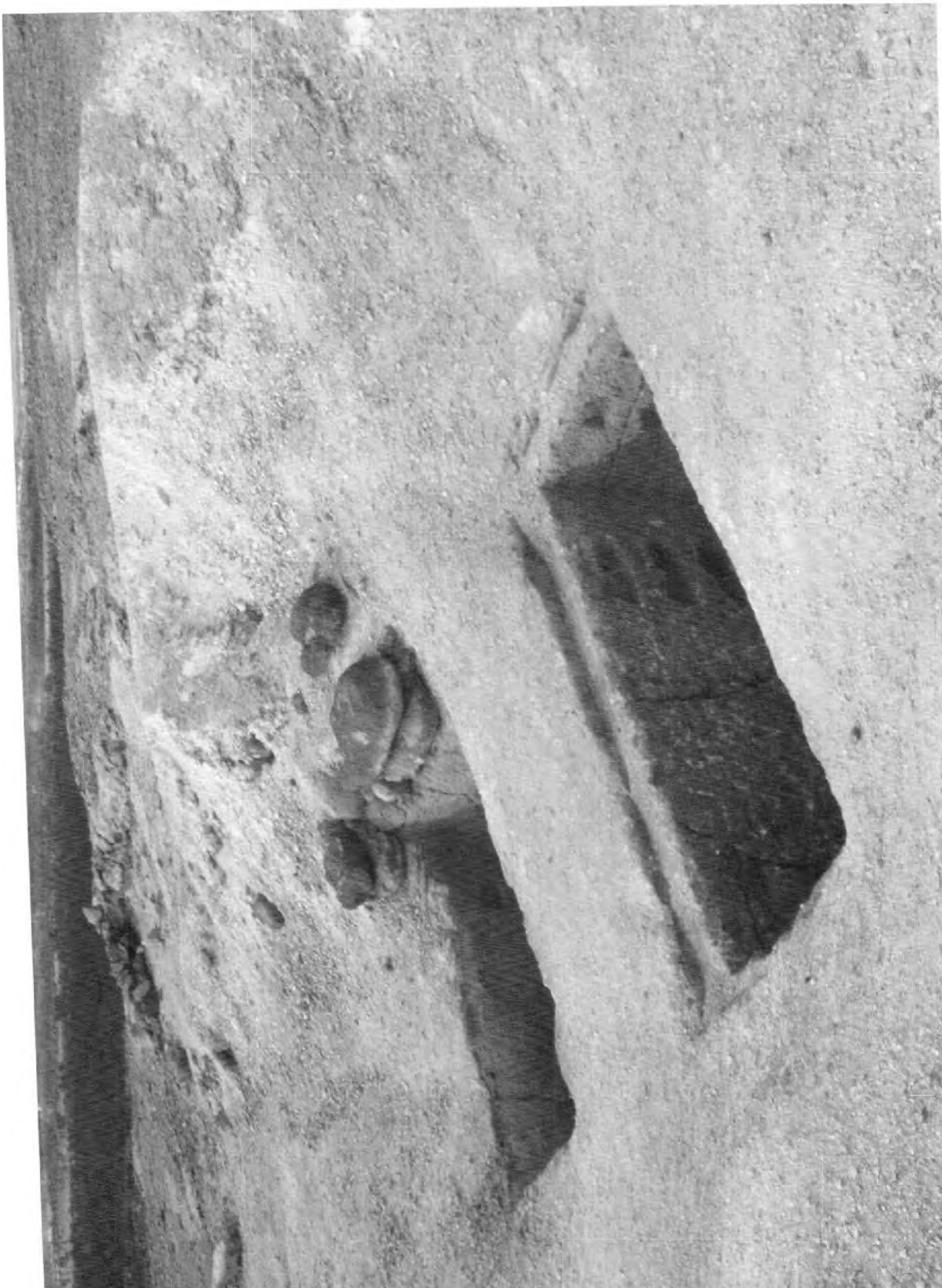
b) Wâdî Nakhla, north-east flank, with gallery quarries of Nectanebo (Abu Gamusa quarry)



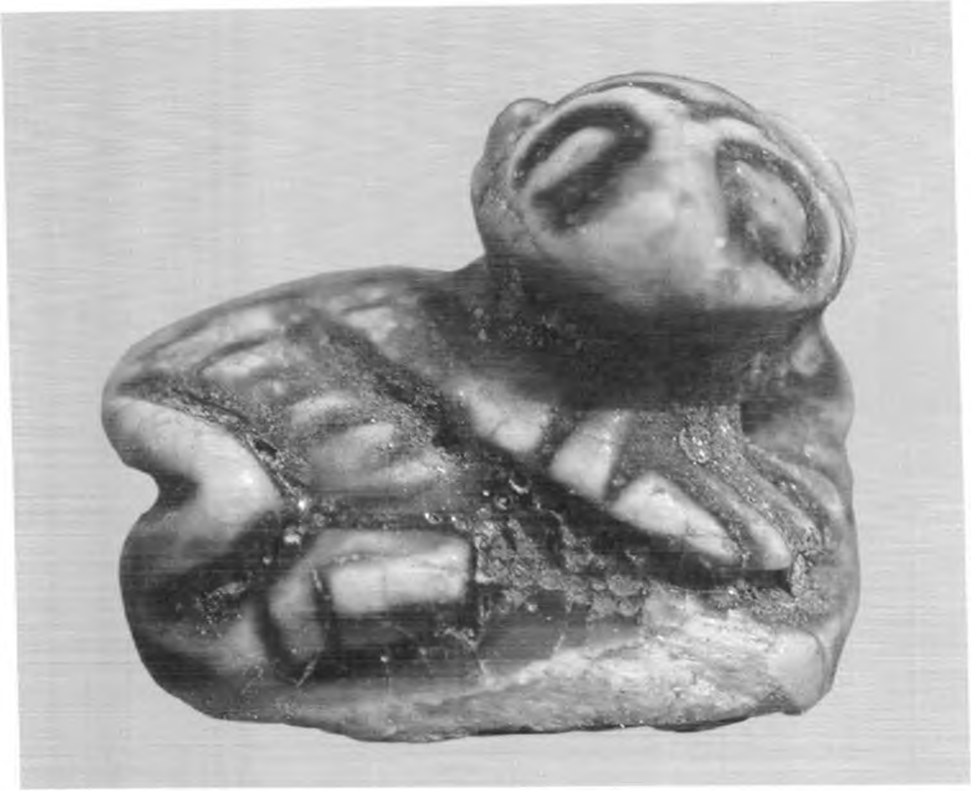
c) Wâdî Nakhla, south flank, middle part, with inclined gallery quarries of Nectanebo



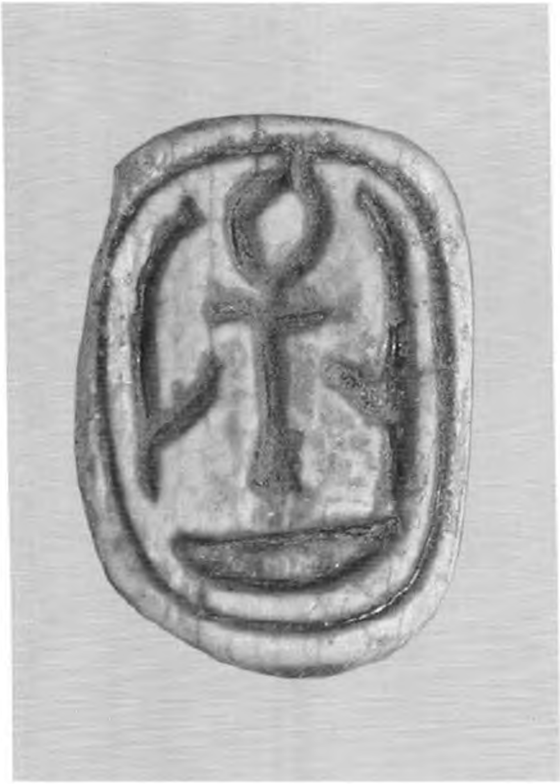
d) Wâdî Nakhla, south-west flank, with New Kingdom quarries, running southern into Amenhotep III quarries



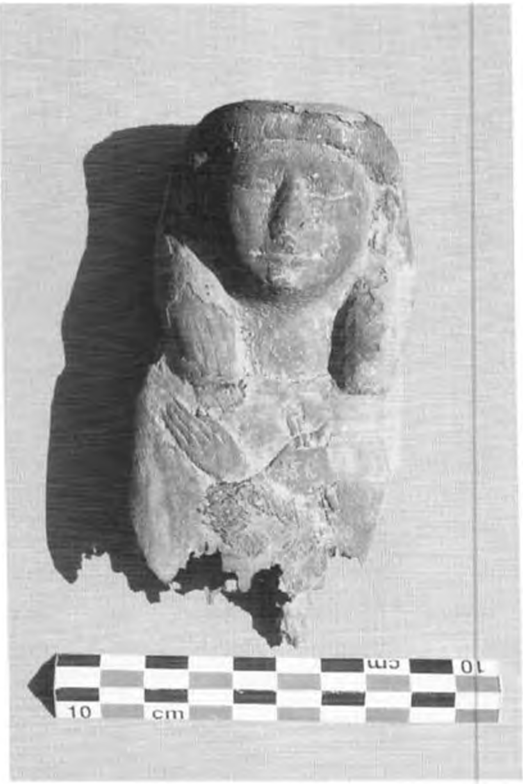
The shafts of tomb 19M70/1



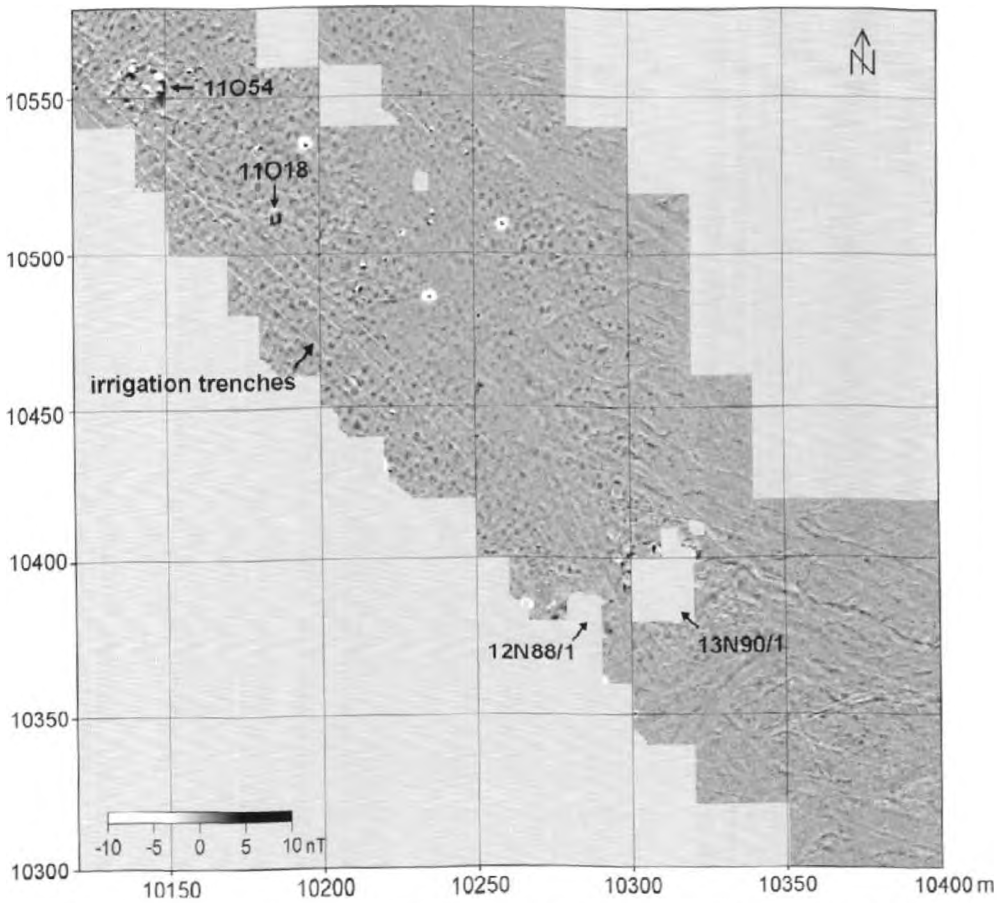
a) Button seal in the shape of a recumbent animal (calf?) found in tomb 16K86/1



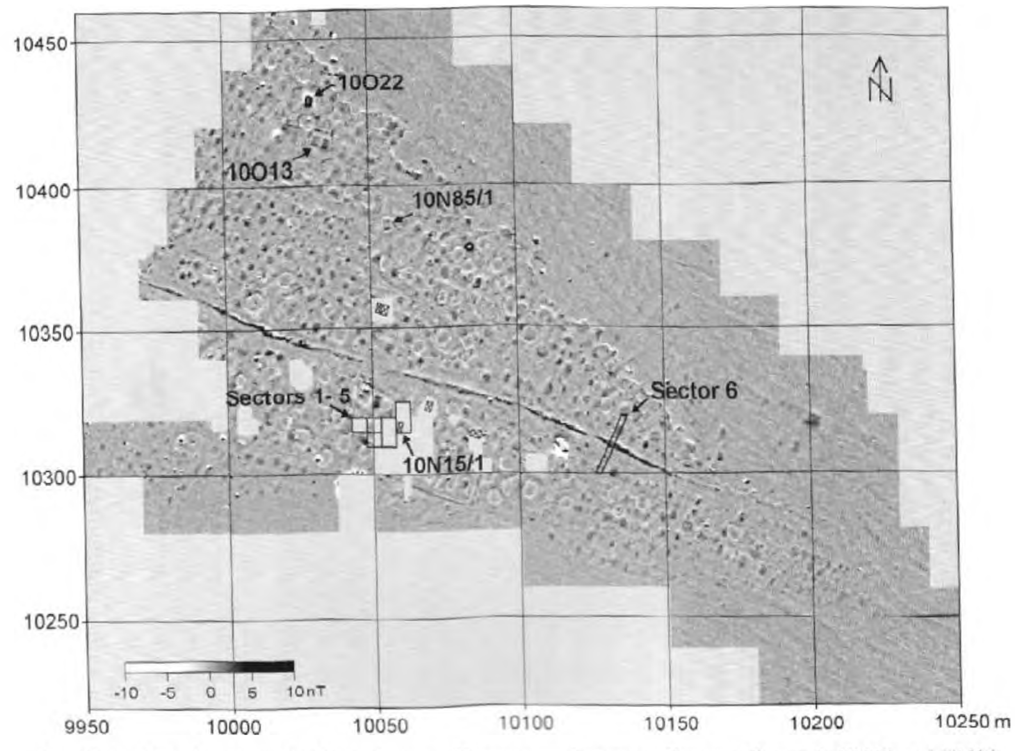
b) Bottom of the button seal found in tomb 16K86/1



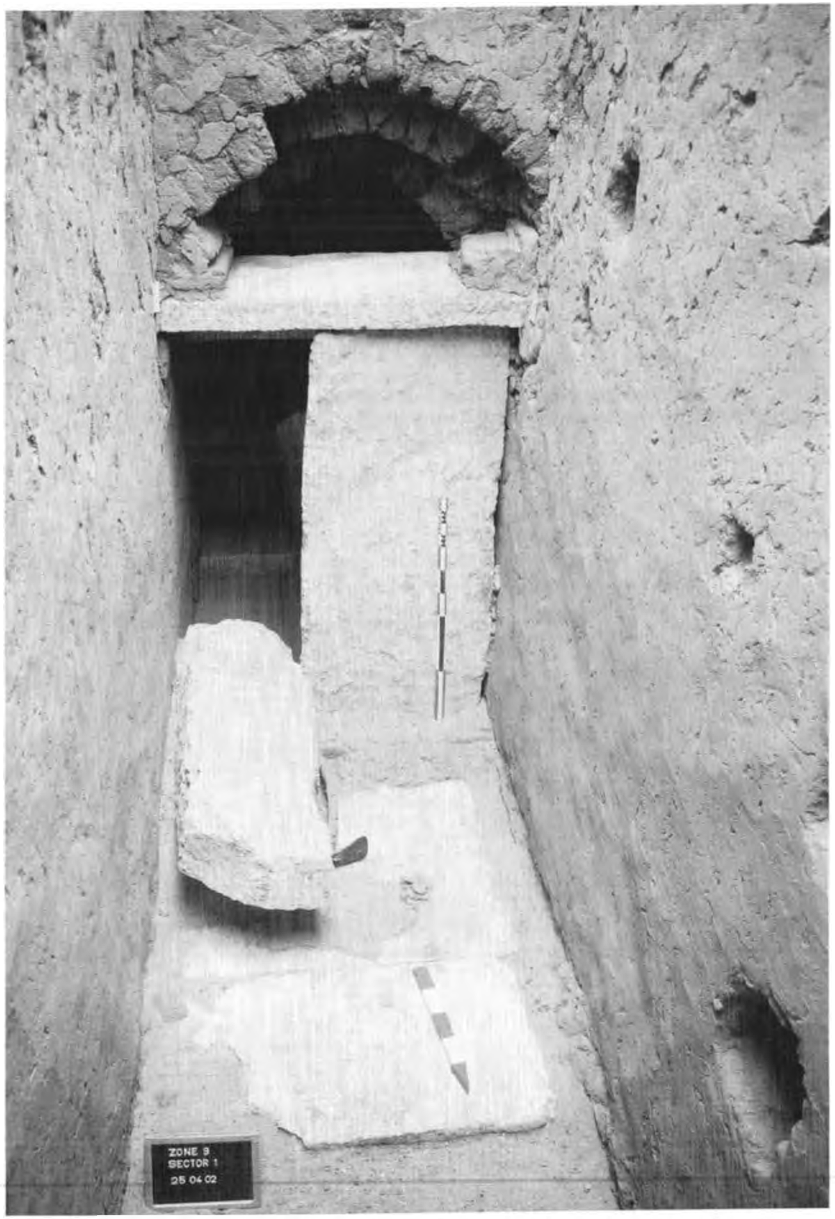
c) Fragmentary shabti found in the fill of 10N15/1



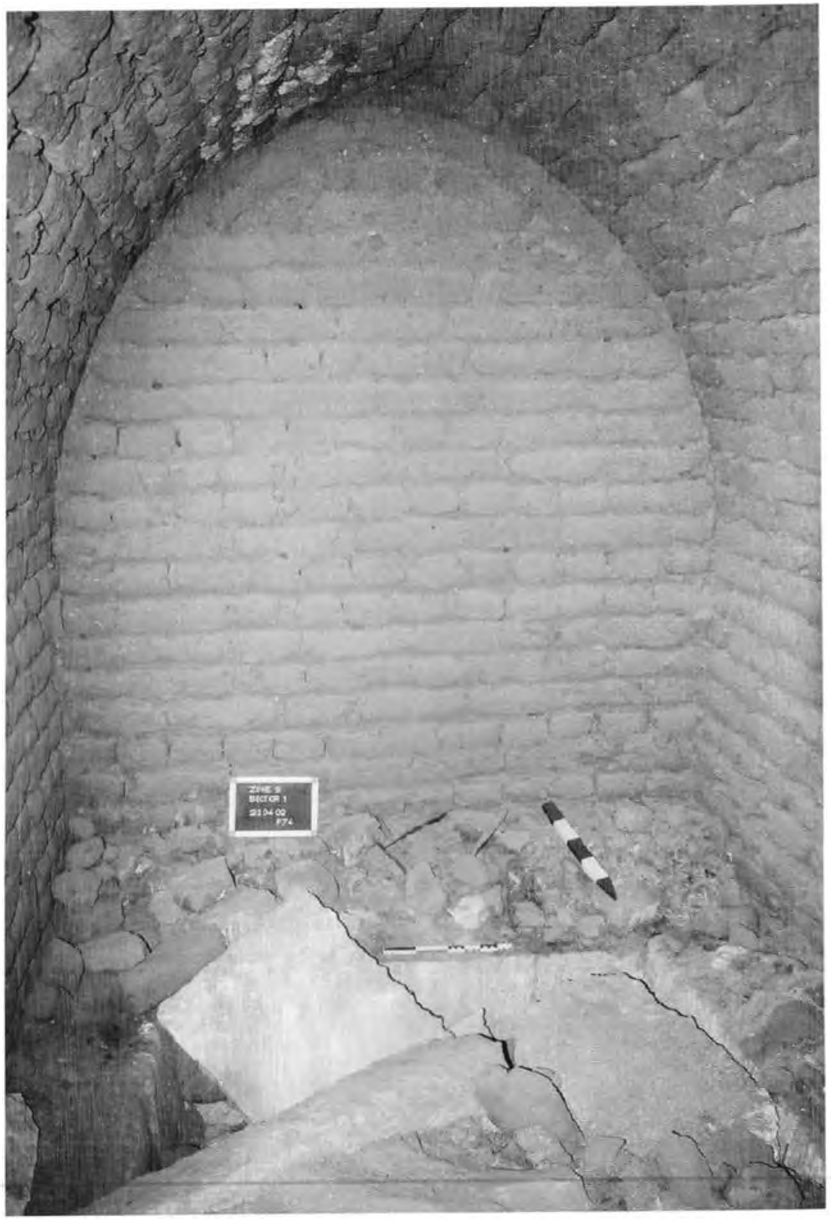
a) Deir al-Barsha. Zone 8. Magnetic map. Fluxgate gradiometers Geoscan Research FM18 and FM36. Sampling grid 0.25 by 0.50 m



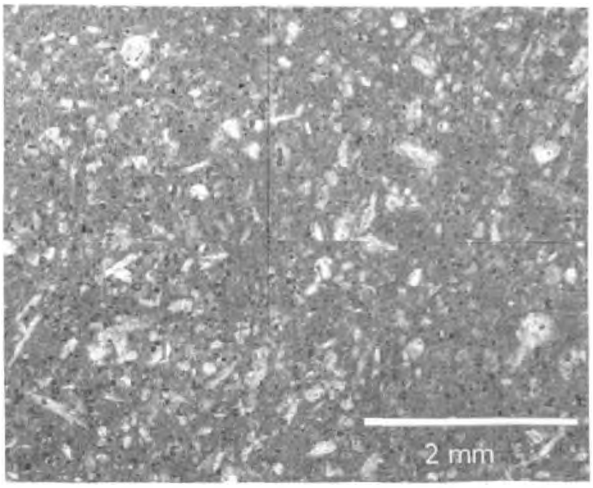
b) Deir al-Barsha. Zone 9. Magnetic map. Fluxgate gradiometers Geoscan Research FM18 and FM36. Sampling grid 0.25 by 0.50 m



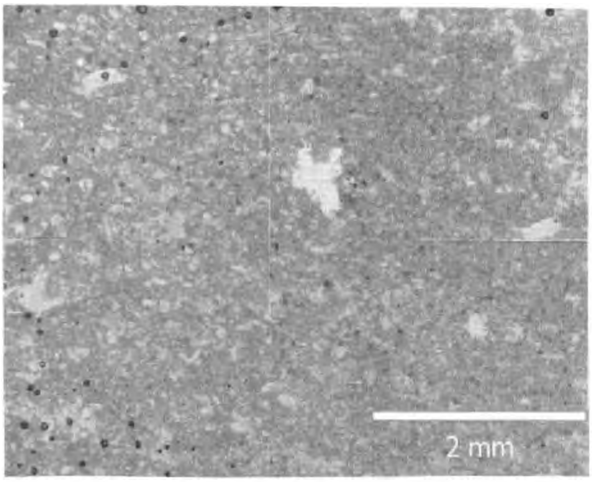
a) Shaft of tomb 10N15/1 looking to the north. The hack was found *in situ*



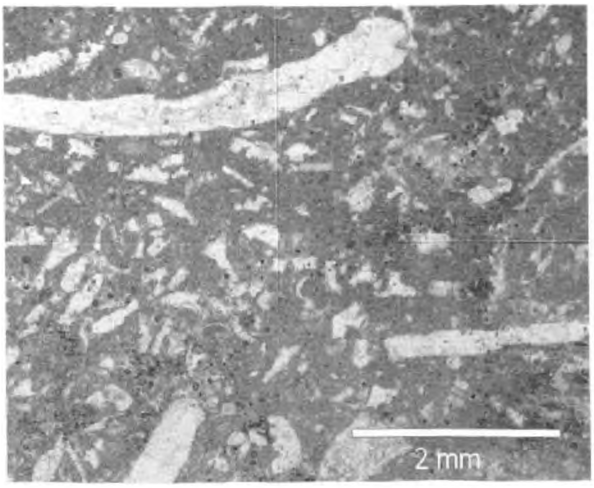
b) Southern burial chamber of tomb 10N15/1 as found, looking to the north



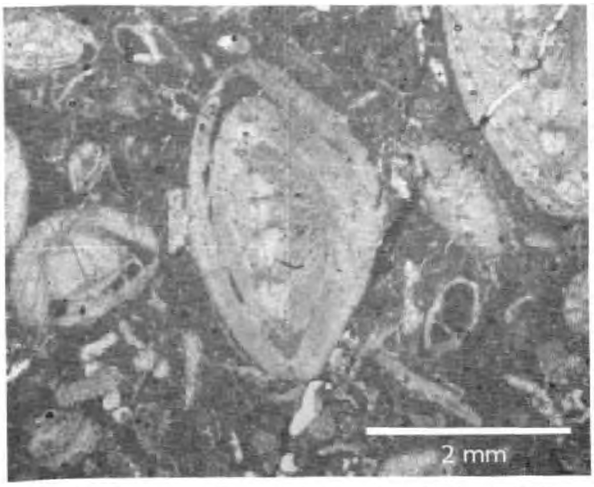
a) Average wackestone from Amenhotep III quarry, Wâdî Nakhla sequence, southern wadi flank



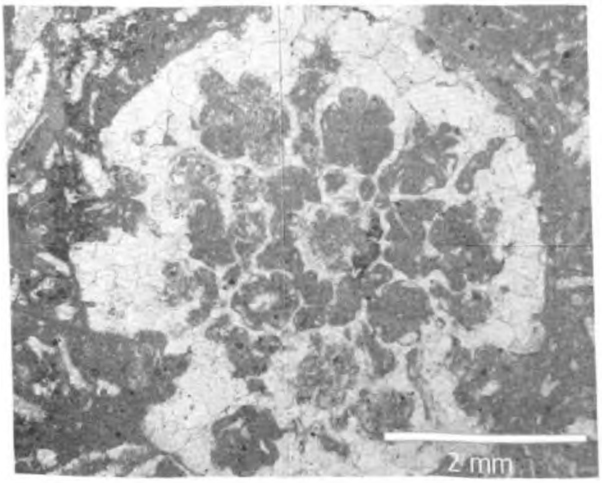
b) Wackestone from cycle 13, New Kingdom quarry above the tomb of Djehutihotep, northern wadi flank



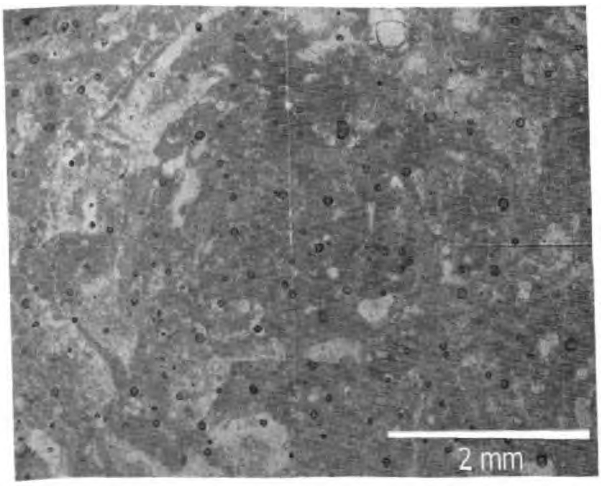
c) Packstone with shell fragments and fossil debris from cycle 6, northern Wâdî Nakhla sequence



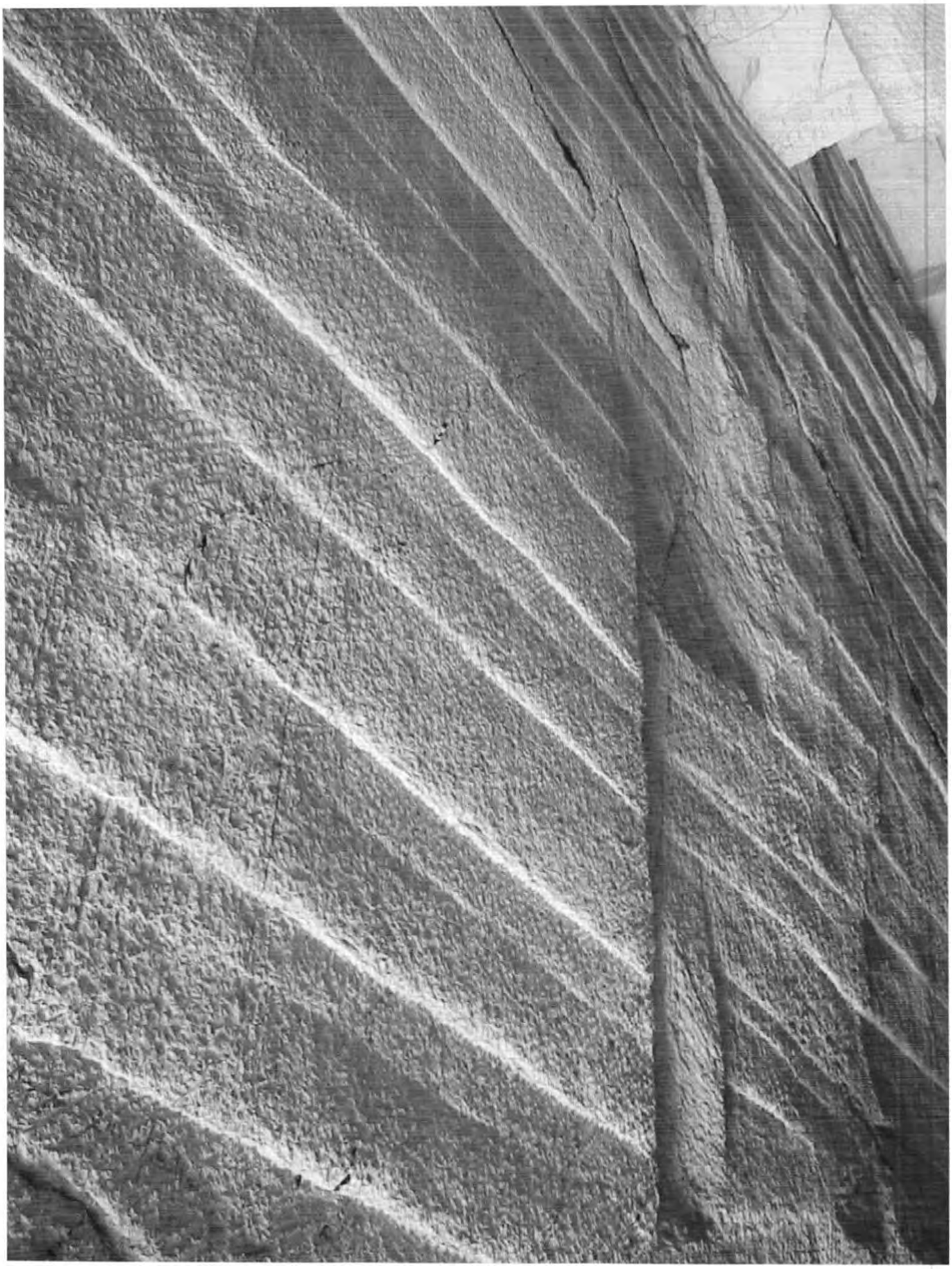
d) Wackestone with small nummulites and fossil debris, cycle 10, northern Wâdî Nakhla sequence



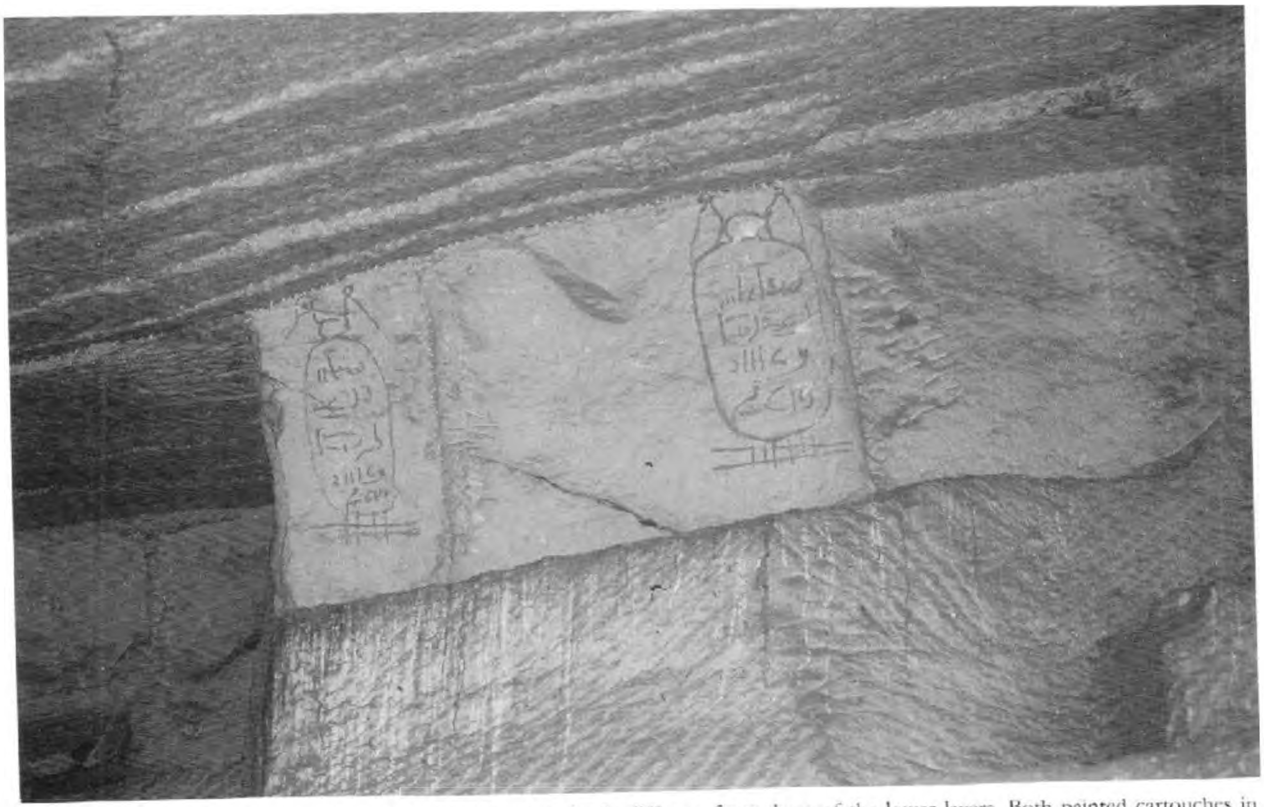
d) Coral cross-section in wackestone of cycle 6, Wâdî Nakhla sequence



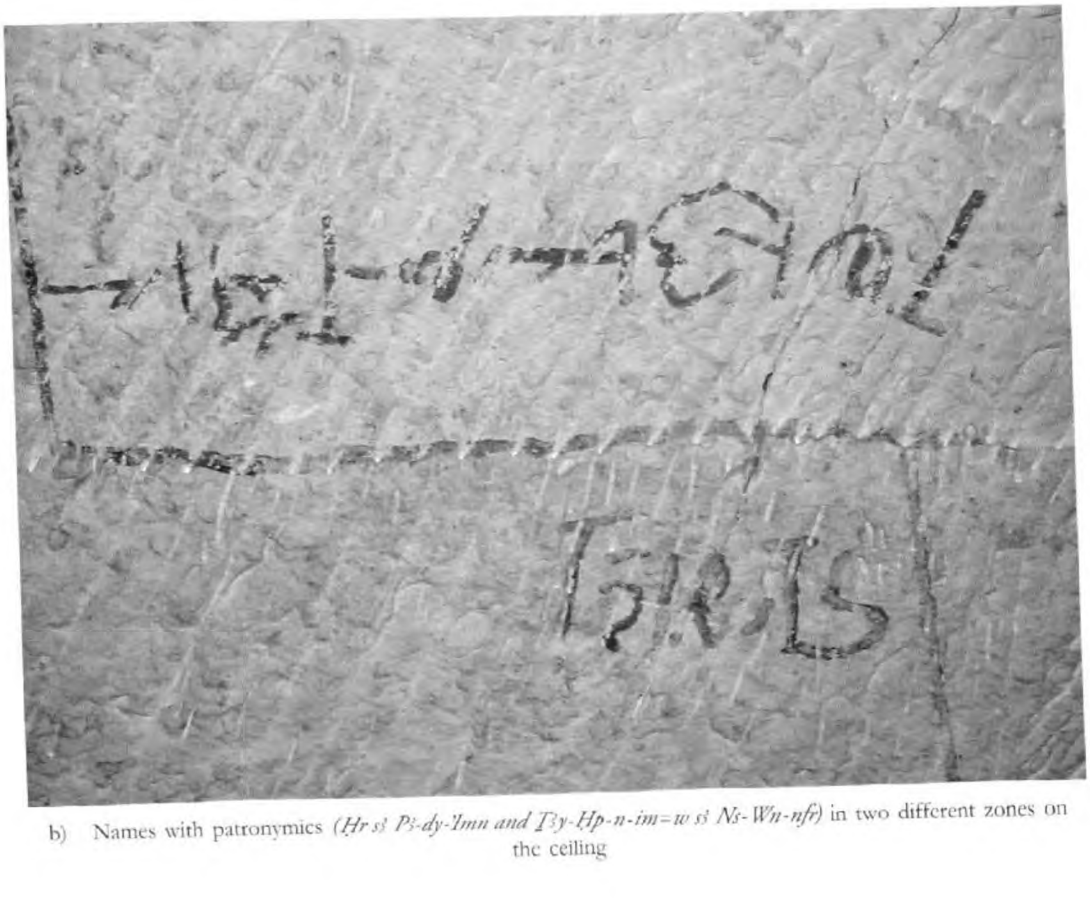
e) Coral ghost-structure in calcified wackestone of cycle 4, Wâdî Nakhla sequence, northern flank



Section from the ceiling in quarry 2, showing clearly the regular bands of chisel marks running parallel towards the rear of the quarry



a) The traces left by the extraction of the top layer are clearly different from these of the lower layers. Both painted cartouches in Demotic belong to Nectanebo I



b) Names with patronymics *(Ḥr sꜣ Pꜣ-dy-Ỉmn and Ṯꜣy-Ḥp-n-im=w sꜣ Ns-Wn-nfr)* in two different zones on the ceiling

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THE COLOSSI OF MEMNON AND AMENHOTEP III MORTUARY TEMPLE

AT KÔM EL - HETTAN, THEBES

ARCHAEOLOGICAL MAP

SHEET 2

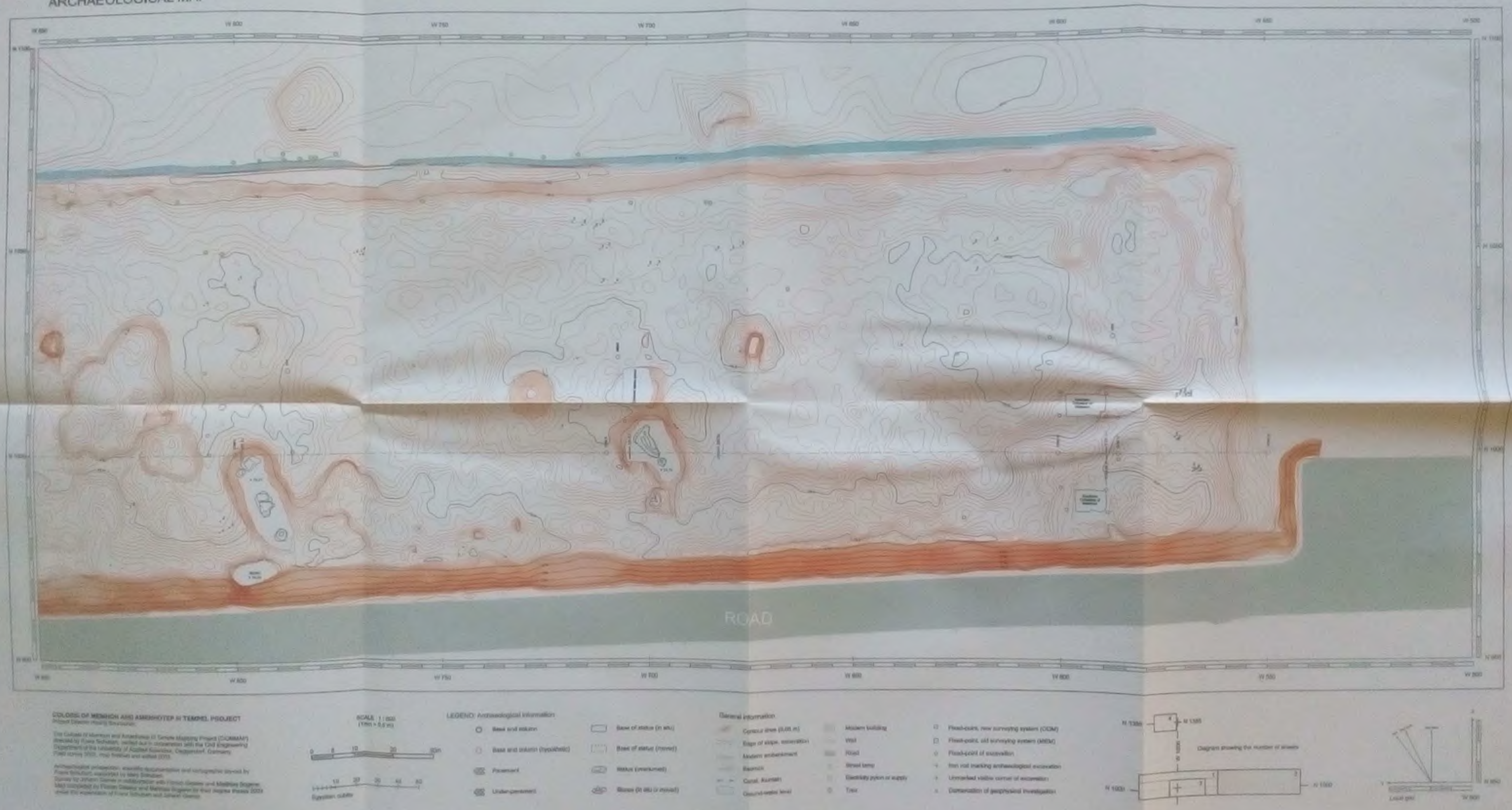
W 850
W 800
W 750
W 700
W 650
W 600
W 550
W 500
N 1100
N 1050
N 1000
N 950
ROAD
COLOSSI OF MEMNON AND AMENHOTEP III TEMPEL PROJECT
SCALE 1 : 500
0
5
10
20
30m
10
20
30
40
50
Egyptian cubits
LEGEND: Archaeological information
Base and column
Base and column (hypothetic)
Pavement
Under-pavement
Base of statue (in situ)
Base of statue (moved)
Statue (unexhumed)
Stones (in situ or moved)
General information
Contour lines (0,05 m)
Edge of slope, excavation
Modern embankment
Basmick
Canal, Kursiah
Ground-water level
Modern building
Wall
Road
Street lamp
Electricity pylon or supply
Tree
Fixed-point, new surveying system (CGM)
Fixed-point, old surveying system (MBM)
Fixed-point of excavation
Iron rod marking archaeological excavation
Unmarked visible corner of excavation
Demarcation of geophysical investigation
N 1100
N 1050
N 1000
Diagram showing the number of sheets
1
2
3
4
Local grid
W 900

Fig. [illegible] Archaeological map of the temple, western part

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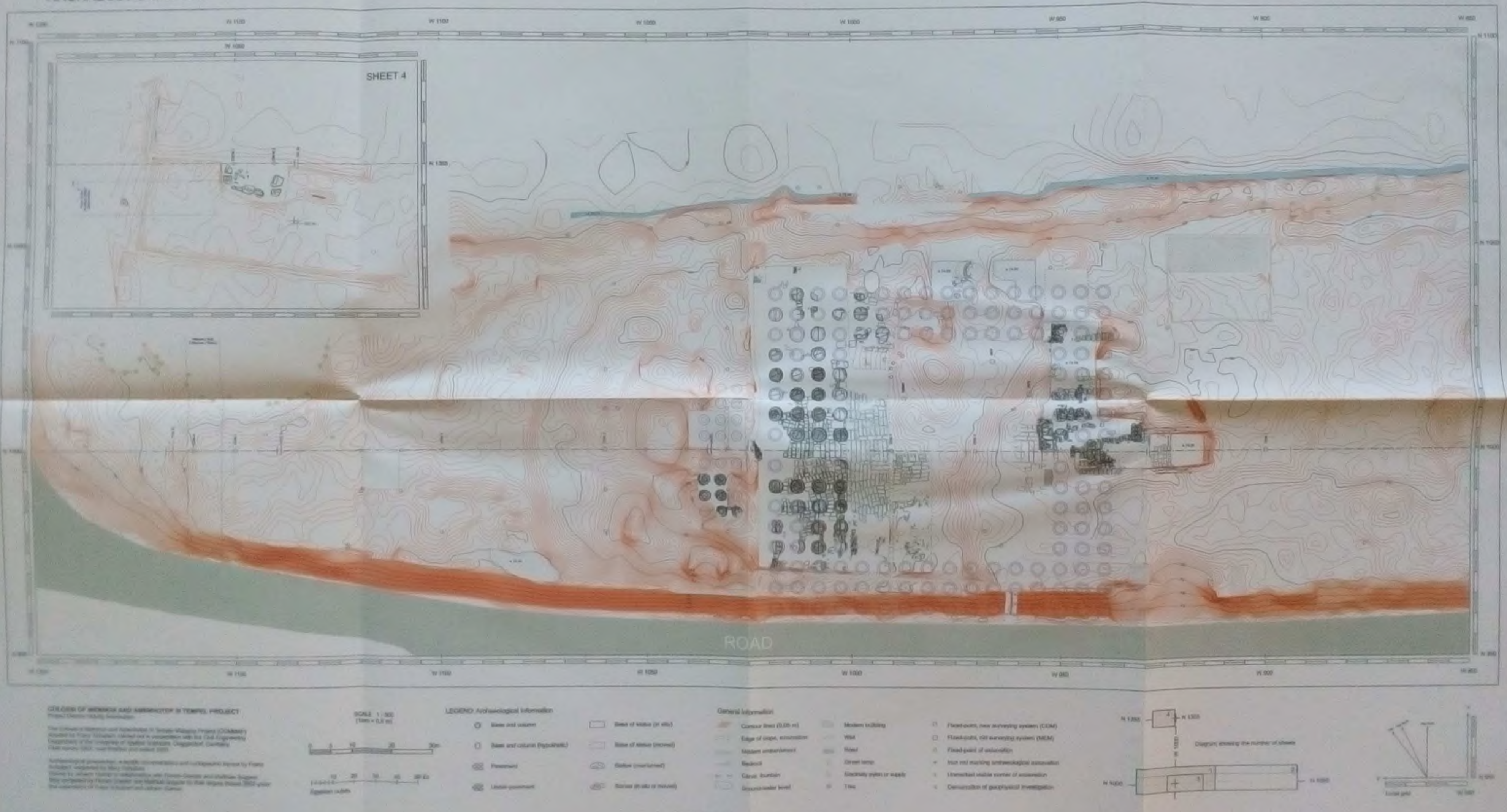
AT KÔM EL - HETTAN, THEBES

ARCHAEOLOGICAL MAP

SHEET 1



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